ALTUSEN™
Enterprise KVM Solutions by ATEN

8/16 Port KVM Over the NET™
KN2108 / KN2116
User Manual

www.altusen.com.tw

Regulatory Information

This is an FCC Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

RoHS

This product is RoHS compliant

User Notice

All information, documentation, and specifications contained in this manual are subject to change without prior notification by the manufacturer. The manufacturer makes no representations or warranties, either expressed or implied, with respect to the contents hereof and specifically disclaims any warranties as to merchantability or fitness for any particular purpose. Any of the manufacturer's software described in this manual is sold or licensed `as is'. Should the programs prove defective following their purchase, the buyer (and not the manufacturer, its distributor, or its dealer), assumes the entire cost of all necessary servicing, repair and any incidental or consequential damages resulting from any defect in the software.

The manufacturer of this system is not responsible for any radio and/or TV interference caused by unauthorized modifications to this device. It is the responsibility of the user to correct such interference.

The manufacturer is not responsible for any damage incurred in the operation of this system if the correct operational voltage setting was not selected prior to operation. PLEASE VERIFY THAT THE VOLTAGE SETTING IS CORRECT BEFORE USE.

Safety Instructions

General

- Read all of these instructions. Save them for future reference.
- Follow all warnings and instructions marked on the device.
- Do not place the device on any unstable surface (cart, stand, table, etc.). If the device falls, serious damage will result.
- Do not use the device near water.
- Do not place the device near, or over, radiators or heat registers.
- The device cabinet is provided with slots and openings to allow for adequate ventilation. To ensure reliable operation, and to protect against overheating, these openings must never be blocked or covered.
- The device should never be placed on a soft surface (bed, sofa, rug, etc.) as this will block its ventilation openings. Likewise, the device should not be placed in a built in enclosure unless adequate ventilation has been provided.
- Never spill liquid of any kind on the device.
- Unplug the device from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- The device should be operated from the type of power source indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- The device is equipped with a 3-wire grounding type plug. This is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not attempt to defeat the purpose of the grounding-type plug. Always follow your local/national wiring codes.
- Do not allow anything to rest on the power cord or cables. Route the power cord and cables so that they cannot be stepped on or tripped over.
- If an extension cord is used with this device make sure that the total of the ampere ratings of all products used on this cord does not exceed the extension cord ampere rating. Make sure that the total of all products plugged into the wall outlet does not exceed 15 amperes.
- To help protect your system from sudden, transient increases and decreases in electrical power, use a surge suppressor, line conditioner, or uninterruptible power supply (UPS).

- Position system cables and power cables carefully; Be sure that nothing rests on any cables.
- When connecting or disconnecting power to hot pluggable power supplies, observe the following guidelines:
- Install the power supply before connecting the power cable to the power supply.
- Unplug the power cable before removing the power supply.
- If the system has multiple sources of power, disconnect power from the system by unplugging all power cables from the power supplies.
- Never push objects of any kind into or through cabinet slots. They may touch dangerous voltage points or short out parts resulting in a risk of fire or electrical shock.
- Do not attempt to service the device yourself. Refer all servicing to qualified service personnel.
- If the following conditions occur, unplug the device from the wall outlet and bring it to qualified service personnel for repair.
  - The power cord or plug has become damaged or frayed.
  - Liquid has been spilled into the device.
  - The device has been exposed to rain or water.
  - The device has been dropped, or the cabinet has been damaged.
  - The device exhibits a distinct change in performance, indicating a need for service.
  - The device does not operate normally when the operating instructions are followed.
- Only adjust those controls that are covered in the operating instructions. Improper adjustment of other controls may result in damage that will require extensive work by a qualified technician to repair.

Rack Mounting

- Before working on the rack, make sure that the stabilizers are secured to the rack, extended to the floor, and that the full weight of the rack rests on the floor. Install front and side stabilizers on a single rack or front stabilizers for joined multiple racks before working on the rack.
- Always load the rack from the bottom up, and load the heaviest item in the rack first.
- Make sure that the rack is level and stable before extending a device from the rack.
- Use caution when pressing the device rail release latches and sliding a device into or out of a rack; the slide rails can pinch your fingers.
- After a device is inserted into the rack, carefully extend the rail into a locking position, and then slide the device into the rack.
- Do not overload the AC supply branch circuit that provides power to the rack. The total rack load should not exceed 80 percent of the branch circuit rating.
- Ensure that proper airflow is provided to devices in the rack.
- Do not step on or stand on any device when servicing other devices in a rack.

Package Contents

The KN2108 / KN2116 package consists of:

1 KN2108 or KN2116 KVM Over the NET™ KVM Switch

1 Power Cord

1 Rack Mount Kit (brackets and Phillips head hex M3 x 8 screws)

1 Foot Pad Set (4 pcs.)

1 User Manual*

1 Quick Start Guide

1 Registration Card

Check to make sure that all of the components are present and in good order. If anything is missing, or was damaged in shipping, contact your dealer.

Read this manual thoroughly and follow the installation and operation procedures carefully to prevent any damage to the switch or to any other devices on the installation.

***** Features may have been added to the KN2108 / KN2116 since this manual was printed. Please visit our website to download the most up to date version of the manual.

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About This Manual

This User Manual is provided to help you get the most from your CC1000 system. It covers all aspects of installation, configuration and operation. An overview of the information found in the manual is provided below.

Overview

Chapter 1, Introduction, introduces you to the KN2108 / KN2116 System. Its purpose, features and benefits are presented, and its front and back panel components are described.

Chapter 2, Hardware Setup, provides step-by-step instructions for setting up your installation, and explains some basic operation procedures.

Chapter 3, Administration, explains the administrative procedures that are employed to configure the KN2108 / KN2116's working environment, as well as how to operate the KN2108 / KN2116 from the local console.

Chapter 4, Browser Operation, describes how to log into the KN2108 / KN2116 with your browser, and explains the functions of the icons and buttons on the KN2108 / KN2116 web page.

Chapter 5, The Windows Client, explains how to connect to the KN2108 / KN2116 with the Windows Client software, and describes how to use the OSD to access and control the computers connected to the switch.

Chapter 6, The Java Client, describes how to connect to the KN2108 / KN2116 with the Java Client software, and explains how to use the OSD to access and control the computers connected to the switch.

Chapter 7, The Log File, shows how to use the log file utility to view all the events that take place on the KN2108 / KN2116.

Chapter 8, The Log Server, explains how to install and configure the Log Server.

Chapter 9, AP Operation, describes how to operate the KN2108 / KN2116 using Windows and Java Client application programs, rather than with the browser method.

An Appendix, at the end of the manual provides technical and troubleshooting information.

Conventions

This manual uses the following conventions:

Monospaced	Indicates text that you should key in.
[ ]	Indicates keys you should press. For example, [Enter] means to press the **Enter** key. If keys need to be chorded, they appear together in the same bracket with a plus sign between them: [Ctrl+Alt].
1.	Numbered lists represent procedures with sequential steps.
♦	Bullet lists provide information, but do not involve sequential steps.
→	Indicates selecting the option (on a menu or dialog box, for example), that comes next. For example, Start → Run means to open the *Start* menu, and then select *Run*.
	Indicates critical information.

ALTUSEN Information

Technical Support

North America Technical Phone Support	Registered ALTUSEN product owners are entitled to telephone technical support. Call the ALTUSEN Technical Support Center: 949-453-8885.
International Technical Phone Support	1. Contact your local dealer. 2. Call the ALTUSEN Technical Support Center:(886-2) 8692-6959.
Email Support	Email your questions and concerns to: support@altusen.com
Online Support ◆ Troubleshooting ◆ Documentation ◆ Software Updates	Online troubleshooting that describes the most commonly encountered problems and offers possible solutions to them; online documentation (including electronically available manuals); and the latest drivers and firmware for your product are available at the ALTUSEN website: `http://www.altusen.com`

Getting Help

For additional help, advice, and information, ALTUSEN provides several support options. If you need to contact ALTUSEN technical support with a problem, please have the following information ready beforehand:

- Product model number, serial number, and date of purchase.
- Your computer configuration, including operating system, revision level, expansion cards, and software.
- Any error messages displayed at the time the error occurred.
- The sequence of operations that led up to the error.
- Any other information you feel may be of help

Product Information

For information about all of ALTUSEN's products and how they can help you connect without limits, visit ALTUSEN on the web or contact an ALTUSEN Authorized Reseller.

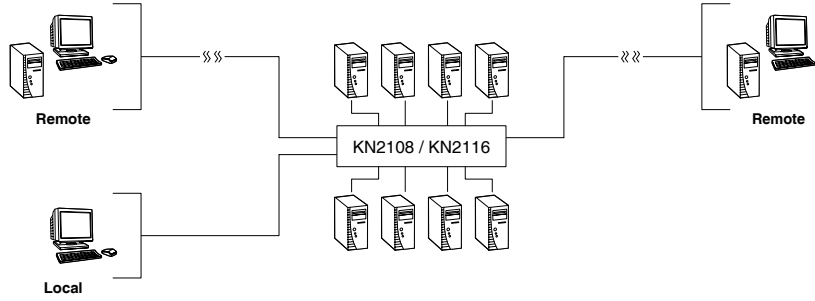
- In the United States of America, call: 866-ALTUSEN (258-8736)
- In Canada and South America, call: 949-453-8885
- In all other locations, call: 886-2-8692-6789
- Visit ALTUSEN on the web at http://www.altusen.com for a list of locations and telephone numbers

Chapter 1
Introduction

Overview

The KN2108 and KN2116 are IP-based KVM control units that allow both local and remote operators to monitor and access multiple computers from a single console. For example, a single KN2116 can control up to 16 computers. By cascading up to 128 compatible KVM switches, up to 1024 computers can be controlled on a complete three stage installation.

Since the KN2108 / KN2116 uses TCP/IP for its communications protocol, it can be accessed from any computer on the Net - whether that computer is located down the hall, down the street, or half-way around the world.



Access to any computer connected to the installation from the local console is easily accomplished either by entering *hotkey* combinations from the keyboard, or by means of a powerful mouse driven OSD (On Screen Display) menu system. A convenient *Auto Scan* feature also permits automatic scanning and monitoring of the activities of all computers running on the installation one by one.

Remote consoles connect to the KN2108 or KN2116 via its IP address. Software utilities provided with the switch make remote access smooth and efficient. A menu driven OSD *Administration* function enables system administrators to handle a multitude of maintenance tasks with ease - from installing and running GUI applications, to BIOS level troubleshooting, routine monitoring, concurrent maintenance, system administration, rebooting and even pre-booting functions.

Remote operators can log in from anywhere on the net via their browser. Once they successfully log in, operators can take control using either the *Windows Client* or *Java Client* utility. Inclusion of a Java-based client allows the switches work with Java 2 enabled operating systems.

The client software allows operators to exchange keyboard, video and mouse signals with the computers attached to the KN2108 or KN2116 just as if they were present locally and working on the equipment directly. With the Panel Array feature, the video output of up to 8 or 16 computers can be displayed at the same time.

The switches feature RJ-45 connectors allowing them to use CAT 5 cable to link to the computers. This space-saving innovation means a full 8 or 16 port switch can be conveniently installed in a 1U system rack, and the installation can take advantage of the internal network wiring built into most modern commercial buildings.

Setup is fast and easy; plugging cables into their appropriate ports is all that is entailed. Because the switches intercept keyboard input directly, there is no need to get involved in complex software installation routines, or to be concerned with incompatibility problems.

Since the firmware is upgradeable over the Net, you can stay current with the latest functionality improvements simply by downloading firmware updates from our website as they become available.

With its advanced security features, the KN2108 and KN2116 provide the fastest, most reliable, most cost effective way to remotely access and manage widely distributed multiple computer installations.

Features

- 8 (KN2108) or 16 (KN2116) port remote access KVM switch – monitor and control up to 8 or 16 computers from a single KVM console
- Remotely access computers via LAN, WAN, or the Internet; control your installation when and where you want
- Supports 3 bus sessions – 1 Local and 2 Remote users can simultaneously access separate ports
- Internet browser access; Windows client and Java client provided; Java client works with all operating systems
- Graphical OSD and graphical toolbars for convenient, user friendly operation
- Panel Array Mode – view all 8 or 16 ports at the same time
- Windows based Log Server
- Remote power control for attached Power Over the NET™ devices
- Up to 64 user accounts – up to 32 concurrent logins
- Three level security: multiadministrator; multiuser; multiviewer
- Advanced security features include password protection and advanced encryption technologies – 1024 bit RSA; 56 bit DES; 256 bit AES; and 128 bit SSL
- RADIUS support
- Flash upgradeable firmware over the network
- Supports all major server platforms and VT100 based serial devices
- Supports multiplatform server environments including PS/2, USB, and Sun
- Supports 10Base-T, 100Base-T, TCP/IP, HTTP
- High video resolution: up to 1280 x 1024 @ 60Hz
- Front panel can separate from the main chassis for convenient front and rear 1U rack mounting
- RJ-45 connectors allow a full 16 port implementation – CAT 5 cable reduces cable bulk

System Requirements

Remote Computers

- For best results, computers that remotely access the switch should have at least a P III 1 GHz processor, with their screen resolution set to 1024 x 768.
- Users who want to access the switch with the Windows Client must have DirectX 7.0 or higher installed. If you don't already have it, DirectX is available for free download from Microsoft's web site: http://www.microsoft.com/downloads.
- Users who want to access the switch with the Java Client must have Sun's Java 2 (1.4.2 or higher) runtime environment installed. Java is available for free download from the Sun Java website: http://java.sun.com
- Browsers must support 128 bit SSL encryption.
- For best results, a network transfer speed of at least 128kbps is recommended.

Computers

The following equipment must be installed on the computers that connect to the KN2108 or KN2116's KVM ports:

- A VGA, SVGA or Multisync port
- A Type A USB port and USB host controller (for USB KVM Adapter Cable Connection, see *KVM Adapter Installation Diagrams*, page 21)
- 6-pin mini-DIN keyboard and mouse ports (for PS/2 KVM Adapter Cable Connection, see *KVM Adapter Installation Diagrams*, page 21

KVM Adapter Cables (CPU Modules)

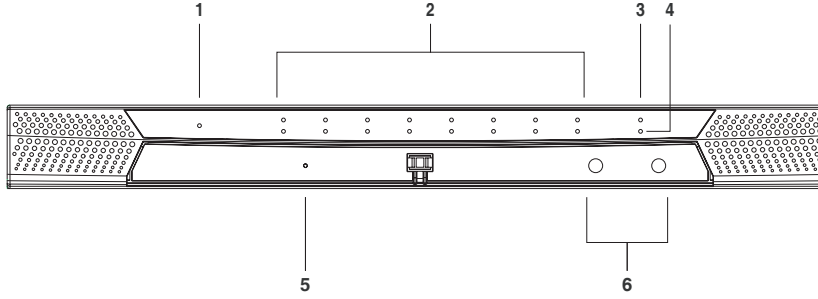
- Cat 5 (or higher) cable is required to connect the KN2108 / KN2116 to one of the KVM Adapter Cables (see *Single Stage Installation Diagram*, page 20).
- The following KVM Adapter Cables are required for use with the KN2108 / KN2116:

Function	Module
Connect to devices with PS/2 ports	KA9120
Connect to devices with USB ports	KA9170
Connect to Sun Legacy computers	KA9130
Connect to Sun USB computers	KA9131
Connect to serial based devices	KA9140

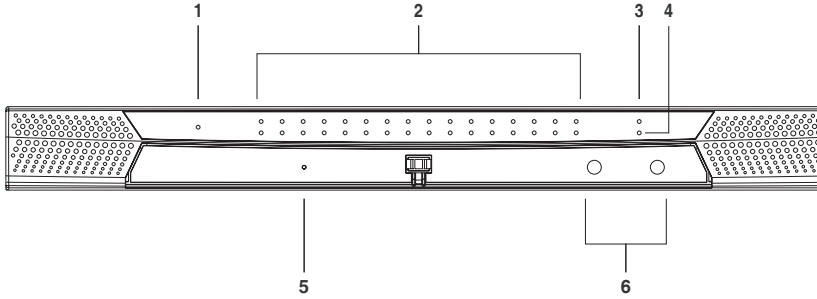
Components

Front View

KN2108:



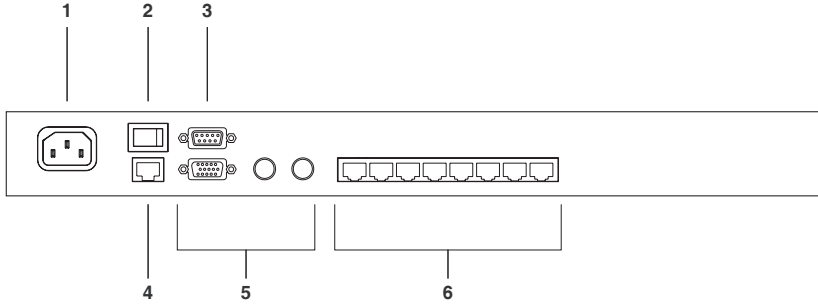
KN2116:



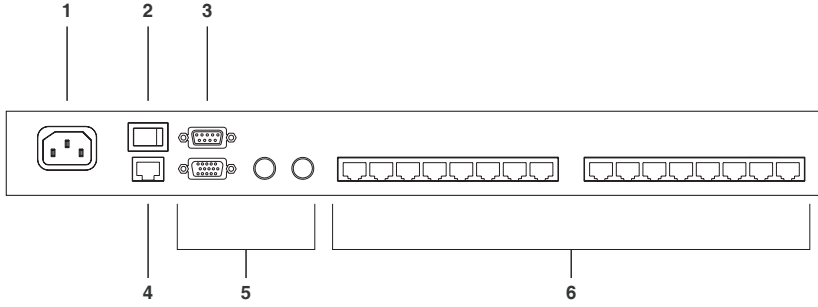
No.	Component	Description
1	Power LED	Lights when the KN2116 is powered up and ready to operate.
2	Port LEDs	The Port LEDs provide status information about their corresponding CPU Ports. There is one pair of LEDs for each Port. The one on the top is the On Line LED; the one on the bottom is the Selected Port LED: ◆ An On Line LED lights GREEN to indicate that the computer attached to its corresponding port is up and running. ◆ A Selected LED lights RED to indicate that the computer attached to its corresponding port is the one that has the KVM focus. The LED is steady under normal conditions, but flashes when its port is accessed under Auto Scan Mode (see *Auto Scanning*, page 64. ◆ When the KN2116 is first powered on, the On Line and Selected LEDs blink in sequence as the Switch performs a self-test.
3	Link LED	Flashes GREEN to indicate that a Client program is accessing the device.
4	10/100 Mbps Data LED	◆ The LED lights ORANGE to indicate 10 Mbps data transmission speed. ◆ The LED lights GREEN to indicate 100 Mbps data transmission speed.
5	Reset Switch	**Note:** This switch is recessed and must be pushed with a thin object - such as the end of a paper clip, or a ballpoint pen. ◆ Pressing and holding this switch in while powering on the KN2116 makes the switch use the factory installed firmware version rather than the firmware version that the switch has been upgraded to. This allows you to recover from a failed firmware upgrade and gives you the opportunity to try upgrading the firmware again. ◆ Pressing and holding this switch in for more than two seconds performs a system reset.
6	Port Switching Buttons	◆ Press **Port DOWN** to switch from the current port to the previous port on the installation. ◆ Press **Port UP** to switch from the current port to the next port on the installation.

Rear View

KN2108:



KN2116:



No.	Component	Description
1	Power Socket	The power cable plugs in here.
2	Power Switch	This standard rocker switch powers the unit on and off.
3	PON Port	This connector is provided for a Power over the Net™ (PON) unit to plug into. A PON device allows computers attached to the KN2116 to be booted remotely over the net. Contact your dealer for more details.
4	LAN Port	The cable that connects the KN2116 to the Internet plugs in here.
5	Local Console Section	The KN2116 can be accessed via a local console as well as over the Net. The cables for the local console (keyboard, monitor, and mouse) plug in here. Each port is color coded and marked with an appropriate icon to indicate itself.
6	KVM Ports (CPU Ports)	The CAT 5 cables that link the KN2116 to the KVM Adapter Cables that connect to the computers plug in here.

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Chapter 2
Hardware Setup

Overview

For convenience and flexibility that allows mixing the PS/2 and USB interfaces, as well as multiple platforms, the KN2108 / KN2116's design utilizes KVM Adapter Cables, that serve as intermediaries between the switch and the connected devices (refer to the installation diagram on p. 16).

A separate KVM Adapter Cable is required for each computer or device connection. The model numbers of the Adapter Modules are given in the *KVM Adapter Cables (CPU Modules)* section, page 5.

Before You Begin

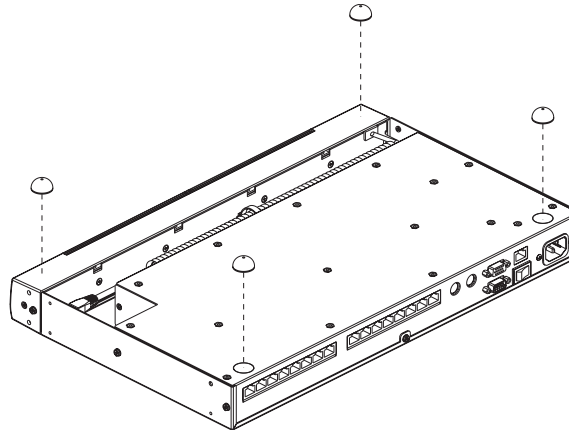
1. Important safety information regarding the placement of this device is provided on page iv. Please review it before proceeding.
2. Make sure that power to all the devices you will be connecting up have been turned off. You must unplug the power cords of any computers that have the Keyboard Power On function.

Stacking and Rack Mounting

The KN2108 / KN2116 can be stacked on the desktop or rack mounted in a variety of ways. The following sections take you through the procedures for each method.

Stacking

The KN2108 / KN2116 can be placed on any appropriate level surface that can safely support its weight plus the weight of its attached cables. To place the KN2108 / KN2116, or to stack units if you are daisy chaining them, remove the backing material from the bottom of the rubber feet that came with this package, and stick them onto the switch's bottom panel at the corners, as shown in the diagram, below:

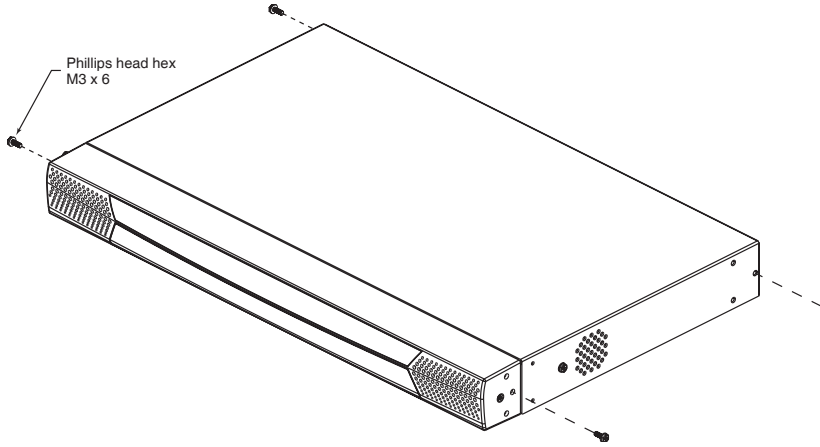


Note: To ensure adequate ventilation, allow at least 5.1 cm on each side, and 12.7cm at the back for power cord and cable clearance.

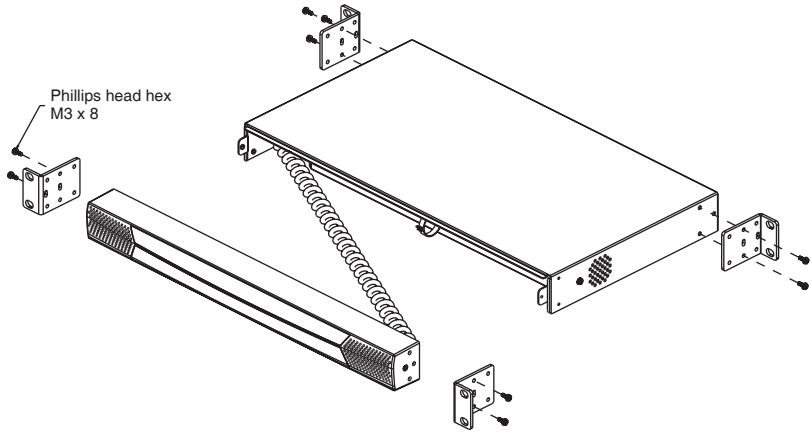
Rack Mounting - Split

The KN2108 / KN2116 can be installed in most standard 19" (1U) racks. There are three configurations: split; front; and rear. Of the three, we recommend the split method.

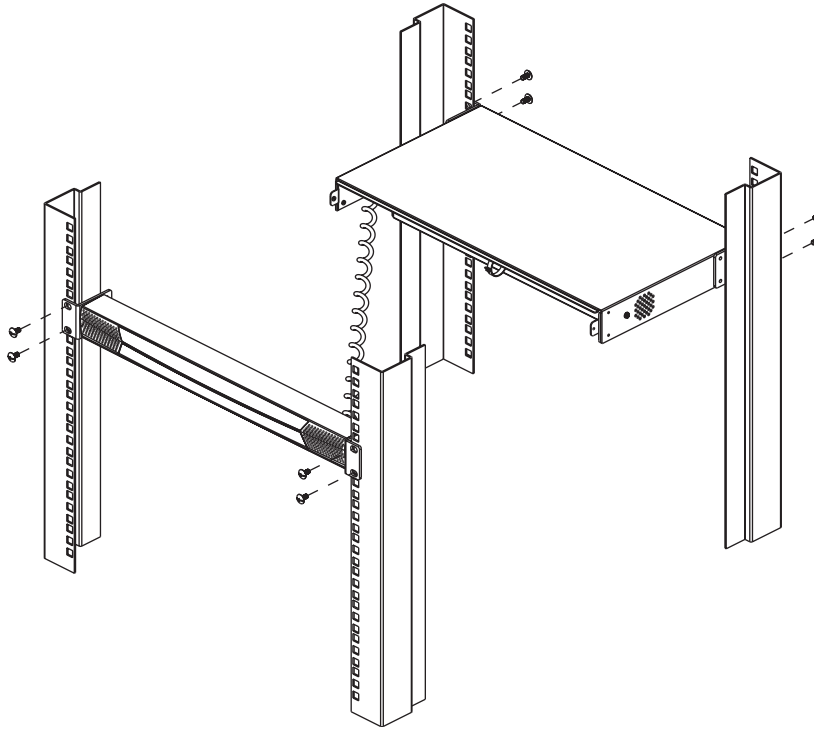
1. Remove the four screws at the front and rear of the unit:



2. Separate the front and rear modules, then use the M3 x 8 Phillips head hex screws supplied with the rack mount kit to screw the rack mounting brackets into both modules:



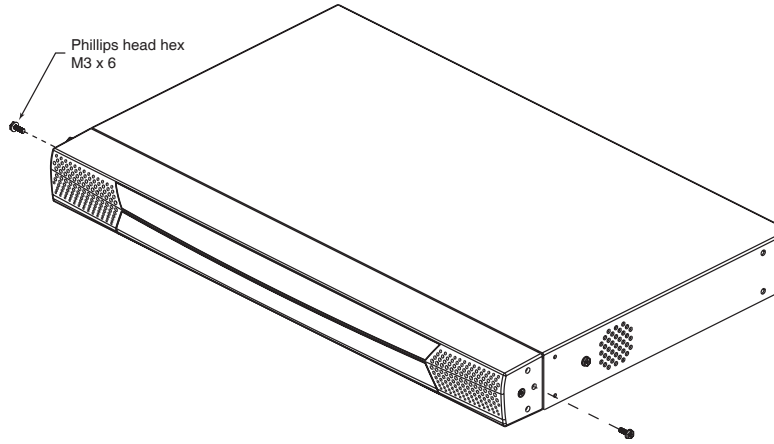
3. Position the device in the rack and align the holes in the mounting brackets with the holes in the rack.
4. Screw the mounting brackets to the rack.



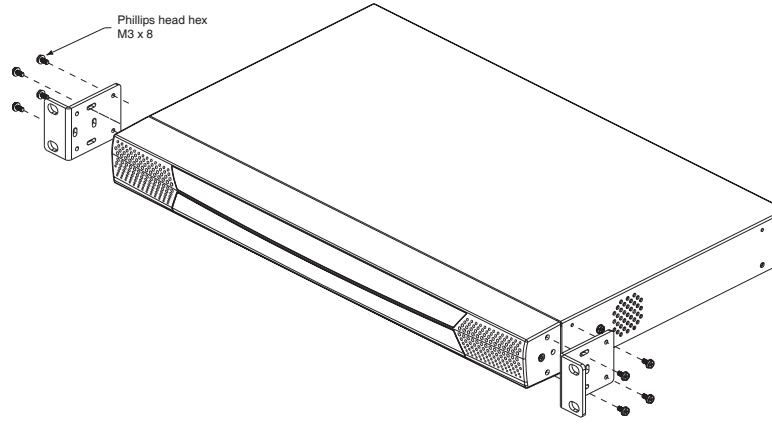
Note: Cage nuts are provided for racks that are not prethreaded.

Rack Mounting - Front

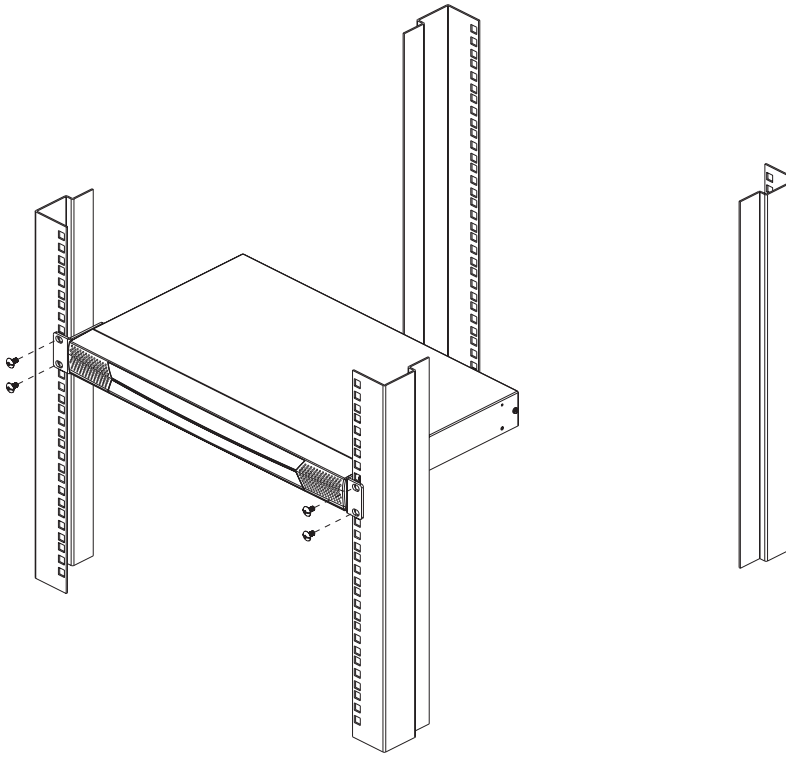
1. Remove the two screws at the front of the unit:



2. Use the M3 x 8 Phillips head hex screws supplied with the rack mount kit to screw the rack mounting brackets into the front of the unit:



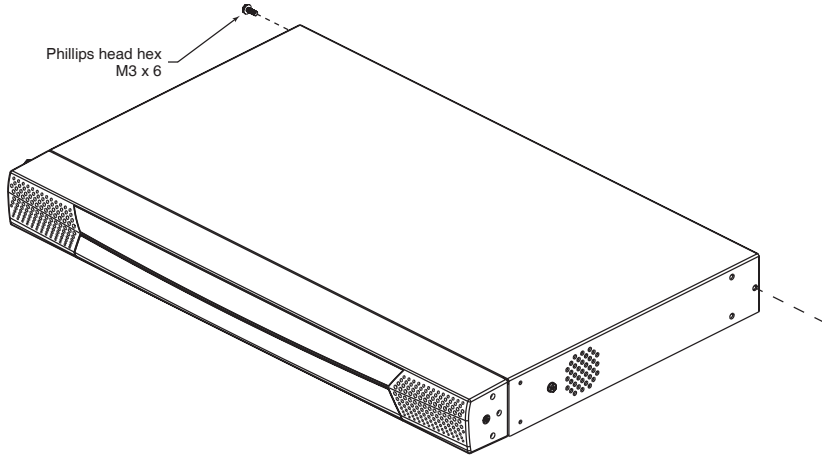
3. Position the device in the rack and align the holes in the mounting brackets with the holes in the rack.
4. Screw the mounting brackets to the front of the rack.



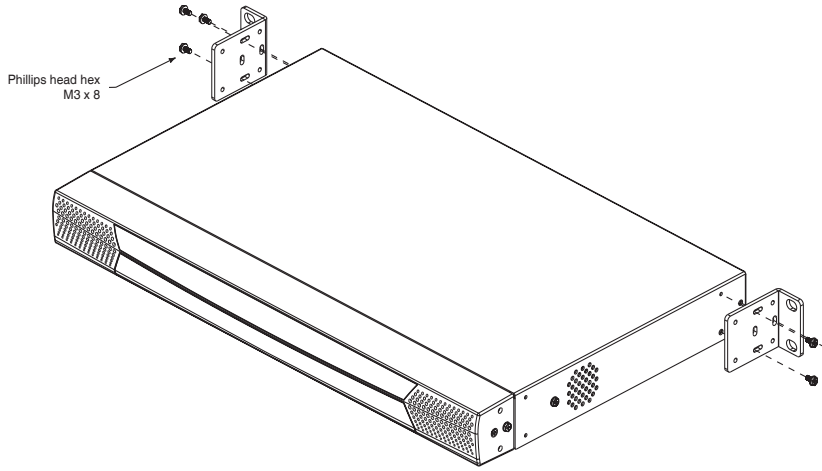
Note: Cage nuts are provided for racks that are not prethreaded.

Rack Mounting - Rear

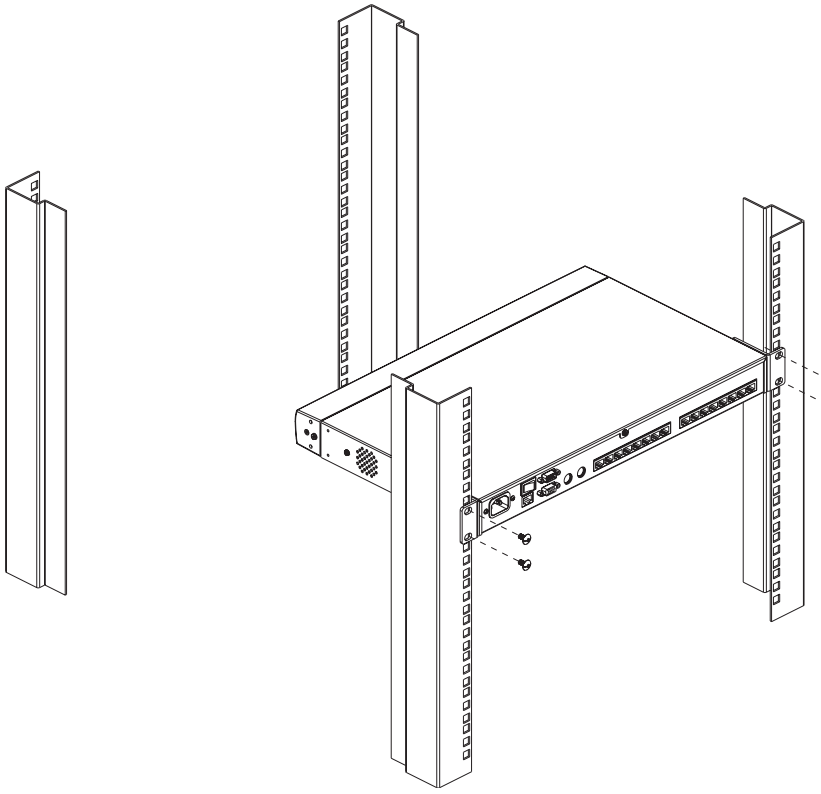
1. Remove the two screws at the rear of the unit:



2. Use the M3 x 8 Phillips head hex screws supplied with the rack mount kit to screw the rack mounting brackets into the rear of the unit:



3. Position the device in the rack and align the holes in the mounting brackets with the holes in the rack.
4. Screw the mounting brackets to the rear of the rack.



Note: Cage nuts are provided for racks that are not prethreaded.

Single Station Installation

In a Single Stage installation, there are no additional KVM switches cascaded down from the KN2108 / KN2116. To set up a single stage installation, refer to the installation diagrams starting on page 20 (the numbers in the diagram correspond with the numbers of the instruction steps), and do the following:

1. Plug your Local Console's keyboard, mouse, and monitor into the unit's Console Ports.

   Note: The distance between the console and the KN2108 / KN2116 must not exceed 20m.

2. Use Cat. 5 cable to connect any available KVM port to a KVM Adapter Cable that is appropriate for the computer you are installing (see the table on page 5 for details).

   Note: The length of Cat 5 cable that links the KN2108 / KN2116 to the KVM Adapter Cable must not exceed 40m.

3. Connect the KVM Adapter Cable to the computer.

   Plug the connectors on the KVM Adapter Cable into the appropriate ports of the computer you are installing. See *KVM Adapter Installation Diagrams*, page 21 for connection examples.

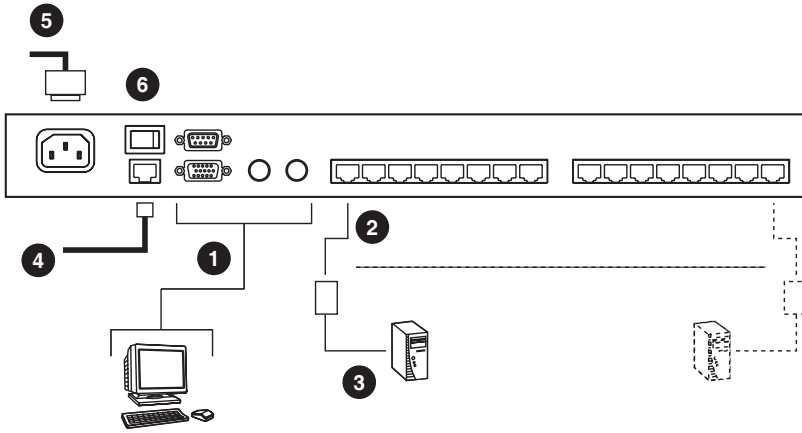
4. Plug the cable from the LAN or WAN into the KN2108 / KN2116's RJ-45 socket.

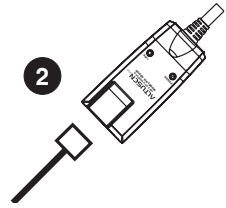
5. Plug the female end of the power cord into the KN2108 / KN2116's Power Socket; plug the male end into an AC power source.

6. Turn on the power to the KN2108 / KN2116.

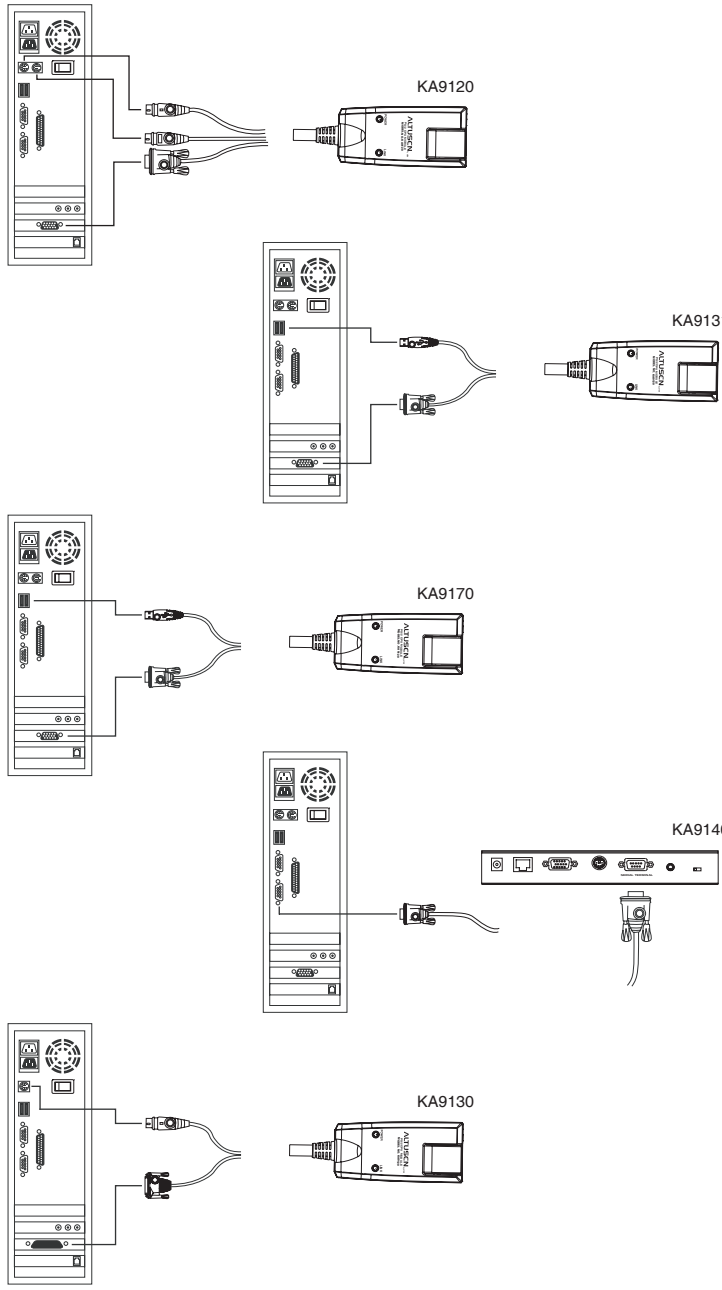
After the KN2108 / KN2116 is powered up, you can turn on the computers.

Single Stage Installation Diagram





KVM Adapter Installation Diagrams



Two Stage Installation

To control even more computers, up to 8 (KN2108) or 16 (KN2116) additional KVM switches can be cascaded from the KVM ports of the KN2108 or KN2116. As many as 64 (KN2108) or 128 (KN2116) computers can be controlled in a complete two stage installation.

In a cascaded installation, the KN2108 / KN2116 is considered the *First Stage* unit, the cascaded switches are considered *Second Stage* units.

Note: The KVM switch shown in the installation example is the KH88. See *Supported KVM Switches*, page 119, for a list of supported KVM switches that can be cascaded from the KN2108 / KN2116.

To set up a two stage installation, refer to the diagram on page 23, and do the following:

1. Make sure that power to all the devices you will be connecting up, including all preexisting devices on the installation, have been turned off.
2. Use Cat 5 cable to connect any available KVM Port on the First Stage unit (the KN2108 / KN2116) to a PS/2 style KVM Adapter Cable (as described under *KVM Adapter Cables (CPU Modules)*, page 5).
3. Plug the adapter cable's KVM connectors to the Keyboard, Video, and Mouse Console ports of the Second Stage unit.

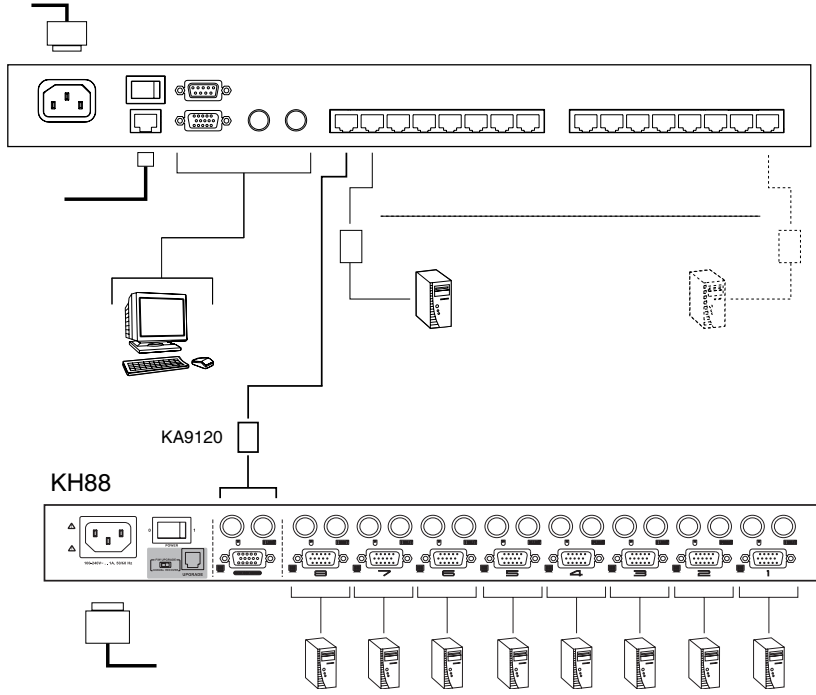
   Note: The distance between the Second Stage unit and the KN2108 / KN2116 must not exceed 40m.

4. Use KVM cable sets (as described in the Cables section of the cascaded KVM switch's User Manual), to connect any available KVM port on the Second Stage unit to the Keyboard, Video, and Mouse ports of the computer you are installing.
5. Plug the power cord that came with the cascaded KVM switch into its Power Socket, and then into an AC power source.
6. Repeat these steps for any other Second Stage units you wish to connect.
7. Power on the Second Stage unit(s), then power on theKN2108 / KN2116.

8. Turn on the power to all the computers.

Note: The Power On sequence requires that all Second Stage units be powered on first. After all the Second Stage units have been powered on, the First Stage unit must be powered on next. After the Second and First stage units have been powered on, the computers can be powered on.

Two Stage Installation Diagram



Hot Plugging

The KN2108 / KN2116 supports hot plugging - components can be removed and added back into the installation by unplugging and replugging their cables from the ports without the need to shut the unit down.

If you change computer positions, however, in order for the OSD menus to correspond to the KVM port changes, you must manually reedit the Port Names to have the OSD reflect the new Port information. See *Port Names*, page 32 for details.

Note: If the computer's Operating System does not support hot plugging, this function may not work properly.

Powering Off and Restarting

If it becomes necessary to power off the KN2108 / KN2116, or if the switch loses power and needs to be restarted, wait 10 seconds before powering it back on. The computers should not be affected by this, but if any of them should fail, simply restart them.

Port ID Numbering

Each computer on the installation is assigned a unique Port ID. The Port ID is a one or two segment number that is determined by the Stage Level and KVM Port number of the KVM switch that the computer is connected to.

The first segment represents the KVM Port number of the First Stage unit; the second segment represents the KVM Port number of the Second Stage unit.

A computer attached to a First Stage unit has a one segment Port ID (from 1-16) that corresponds to the KVM Port number that it is connected to.

A computer attached to a Second Stage unit has a two segment Port ID:

- The second segment (from 1-8), represents the KVM Port number on the Second Stage unit that the computer is connected to. The first segment (from 1-16) represents the KVM Port number on the First Stage unit that the Second Stage unit links back to.
- For example, a Port ID of 12 - 3 refers to a computer that is connected to KVM Port 3 of a Second Stage unit that links back to KVM Port 12 of the First Stage unit.

Port Selection

Port Selection is accomplished by means of the OSD. OSD Operation details are discussed in Chapters 5 and 6.

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Chapter 3
Administration

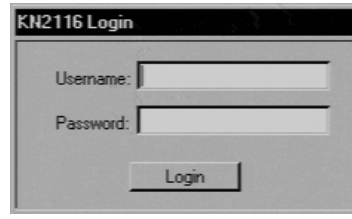
Overview

The OSD's Administration page lets the Administrator (and users with administration permission - see *User Management*, page 36) configure and control overall KN2108 / KN2116 operations. The tab that activates the page is disabled (grayed out) for users who do not have administration permission.

The Local Console

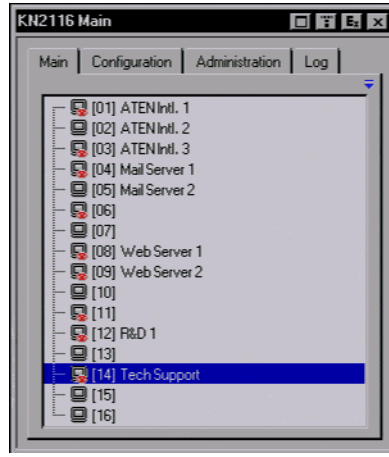
Once the KN2108 / KN2116 has been cabled up, the next step that the Administrator needs to perform is setting the unit up for user operation. The most convenient way to do this for the first time is from the local console.

After the local console has been connected up and the KN2108 / KN2116 turned on, a login prompt appears on the console monitor:



Since this is the first time you are logging in, use the default Username: *administrator*; and the default Password: *password*. For security purposes, we strongly recommend you use the *User Management* function (see p. 36) to remove these and give yourself a unique Username and Password with the appropriate permissions.

After you successfully log in, the Local Console OSD comes up:



The OSD consists of four pages, each with a specific set of functions: Main; Configuration; Administration; and Log. Each of these pages is discussed in the sections that follow

There are four buttons at the right of the title bar. The purpose of each is described (going from left to right), in the table below. Note that the same effect can be achieved by pressing a function key. The corresponding function key is shown in parenthesis below the button name.

Button	Purpose
Screen View ([F6])	Toggles the display between full screen and window view.
Transparency ([F7])	Clicking this button makes the OSD display semi transparent, allowing whatever the OSD screen is covering to show through. Clicking the button again, returns the OSD screen to normal opacity. Note: 1. We recommend setting your monitor refresh rate to a value greater than 75Hz before using this feature. 2. If you switch to a null port when Transparency is enabled, the feature becomes disabled.
Log Out ([F8])	Closes the OSD display and logs you out of the KN2108 / KN2116 session.
Hide ([Esc])	Closes the OSD display but does not log you out of the session. You can bring the display back with the OSD hotkeys (see *OSD Hotkey*, page 80).

The Main Page

The Main page lists all of the KN2108 / KN2116's ports and governs port access. Selecting a port and double clicking it switches you to the device on that port.

- A *port icon* in the shape of a monitor displays in front of the port number. Ports that have devices connected to them that are up and running have the port icon lit in green.
- Ports that have been selected as Quick View ports (see below), have a red *eye* icon displayed with the monitor in the port icon column to indicate so.

In addition to using this page to select ports to switch to, the administrator can also use this page to enable/disable Quick View status for selected ports, and to create, modify, or delete names for each of the ports.

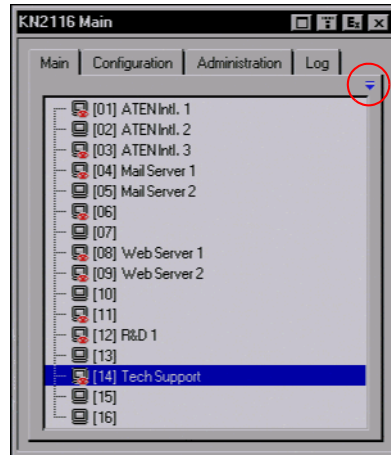
Quick View Ports

Selecting certain ports as Quick View ports is a way of limiting which ports are included when the KN2108 / KN2116 is in auto scan mode. If the KN2108 / KN2116 is configured to only auto scan ports that have Quick View status (see *Scan Select*, page 80), designating a port as a Quick View port in this dialog box means that it will be included when auto scanning is in effect.

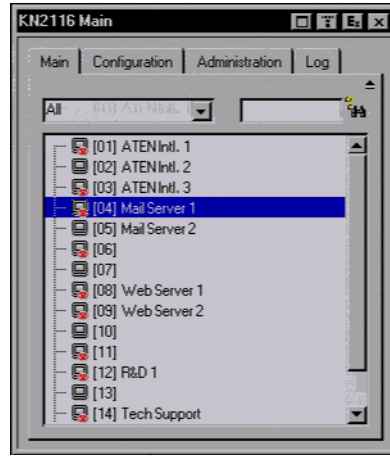
The spacebar toggles a port's Quick View status. To select/deselect a port, highlight it and press the spacebar. When a port has been selected as a Quick View port, a red *eye* icon displays with the monitor icon in the port icon column. When a port isn't selected, there is no red eye icon in the column.

The List Function

The List Function lets you broaden or narrow the scope of which ports the OSD displays (lists) in the Main Screen. To invoke the List Function, click the arrow at the upper right corner of the screen, or press **[F3]**:



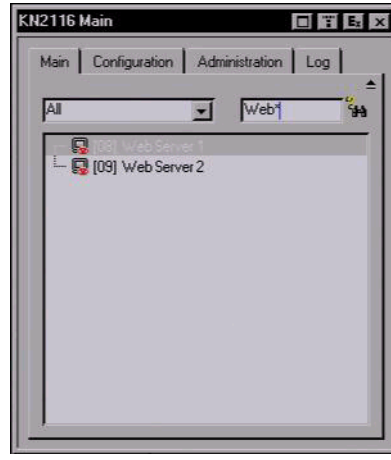
The screen changes to allow you to choose the ports that will be listed:



- The drop down list on the left offers four fixed choices as shown in the table, below:

Choice	Meaning
All	Lists all of the ports on the installation.
Powered On	Lists only the ports that have their attached devices powered on.
Quick View	Lists only the ports that have been selected as Quick View ports
Quick View + Powered On	Lists only the ports that have been selected as Quick View Ports (see p. 29), and that have their attached devices Powered On.

- The text input box on the right allows you to key in a port name so that only port names that match what you key in show up in the List. Wildcards (? and *) are acceptable, so that more than one port can show up in the list. For example, if you key in **Web***, both Web Server 1 and Web Server 2 show up in the list, as shown in the screenshot, below:

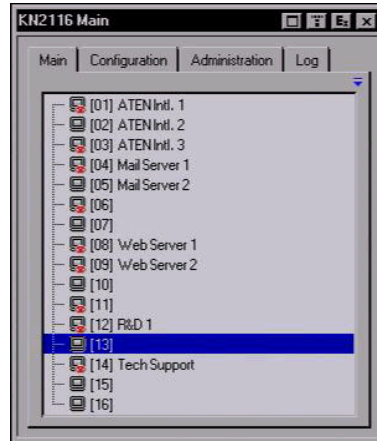


- After you key in your string, either click the binoculars to the right of the box, or press **[Enter]**.
- To go back to the default view, erase the string and either click the binoculars to the right of the box, or press **[Enter]**.
- To dismiss the List function, click the arrow or press **[F3]**.

Port Names

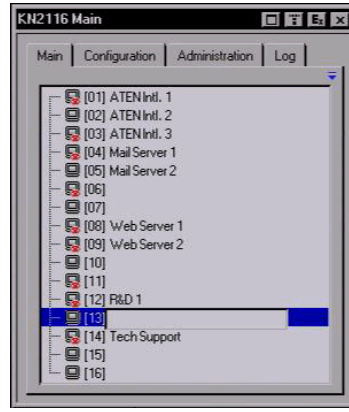
To help remember which computer is attached to a particular port, every port can be given a name. This field allows the Administrator to create, modify, or delete port names. To configure a port name:

1. Click once on the port you want to edit, then either press [F2], or click again on the highlight bar.

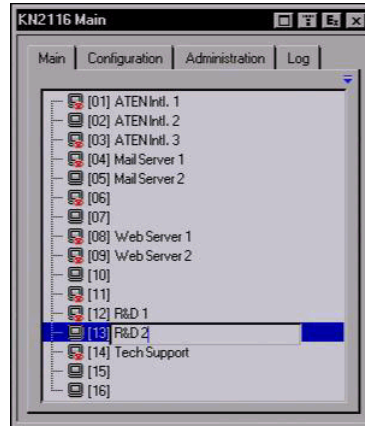


Note: This is not a double click. It involves two separate clicks. A double click will switch you to the device attached to the port.

After a second or two, the bar changes to provide you with a text input box:



2. Key in the new Port Name, or modify/delete the old one.
3. When you have finished editing the port name, click anywhere outside of the input box to complete the operation.

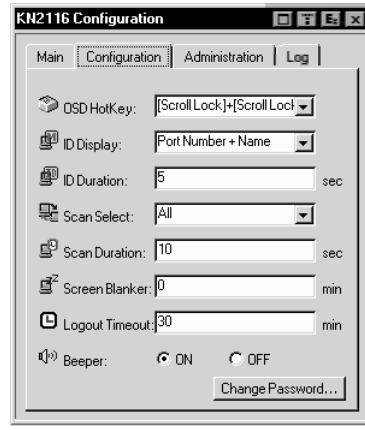


Port Operation

Since port operation is the same as for the Windows and Java Clients, the procedures are discussed in Chapters 5 and 6.

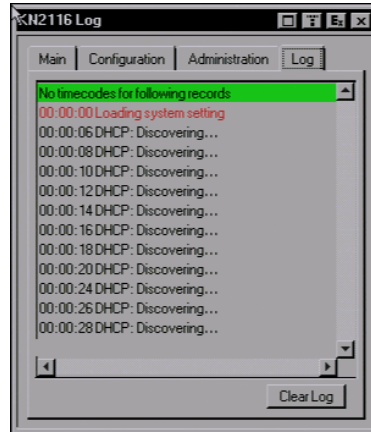
The Configuration Page

The Configuration page sets the operating parameters for each port. Since these operations are the same as the ones for the Windows and Java Clients, their use is discussed in Chapters 5 and 6 (see pp. 59 and 81).



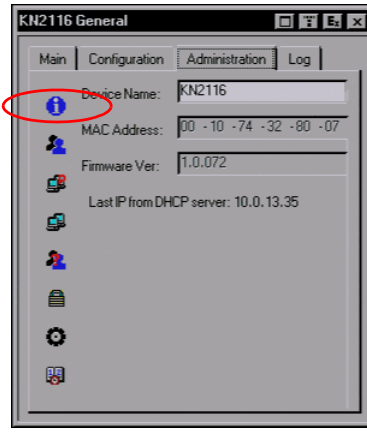
The Log Page

Clicking the Log tab brings up the contents of the log file. The log file is discussed in Chapter 7.



The Administration Page

Each of the administrative functions is represented by an icon at the left of the page. Clicking the icon brings up its associated dialog box. When the Administration page first comes up the General dialog box appears:



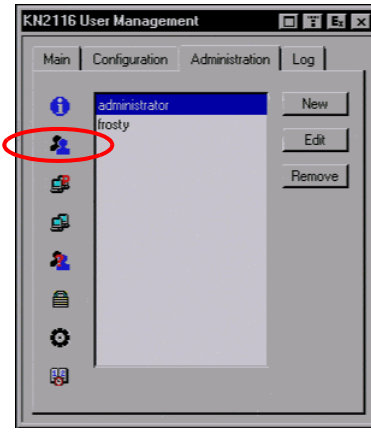
General

The General Page presents four items of information. This is the same information that displays after you log in from a browser, or when you click the General icon at the top left of the browser main page. The meaning of these items is described in the table, below:

Item	Meaning
Device Name	This field lets you give the switch a unique name. This can be convenient when you need to differentiate among several devices in multi station installations.
MAC Address	This item displays the KN2108 / KN2116's MAC address.
Firmware Ver	This item displays the current firmware version number. You can reference it to see if there are newer versions available on the Altusen website.
Last IP from DHCP Server	If the switch is on a network that uses DHCP assigned IP addresses, this item is a convenient way of ascertaining what its IP address is, to inform the Users which IP to use when they connect to the KN2108 / KN2116.

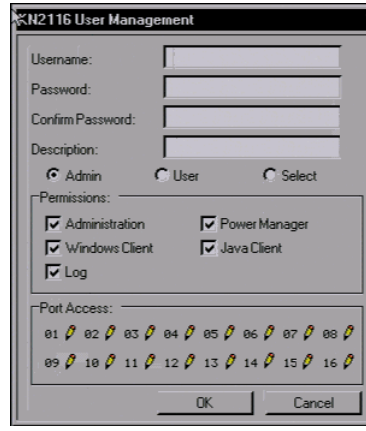
User Management

The User Management dialogs are used to create and manage user profiles. Up to 64 user profiles can be established.



- To delete a user profile, select it in the list box, and Click Remove.
- To modify a user profile, select it and Click Edit.
- To add a user, Click New.

If you choose *Edit* or *New*, a dialog box similar to the one below appears:



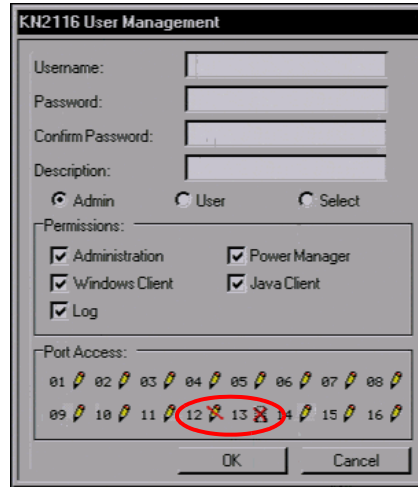
Fill in the required information for a new User profile, or modify the existing information to edit a previous profile. A description of the field headings is given in the table below:

Heading	Description
Username	A minimum of 6 and a maximum of 15 characters is allowed.
Password	A minimum of 8 and a maximum of 15 characters is allowed.
Confirm Password	To be sure there is no mistake in the password, you are asked to enter it again. The two entries must match.
Description	Additional information about the user that you may wish to include.
Admin	Enabling this gives the user Administrator level access to the KN2108 / KN2116. All permissions are granted. (See *Permissions*, in this table.)
User	Enabling this gives the user User level access to the KN2108 / KN2116. Windows Client, Power Manager, and Java Client permissions are granted. (See *Permissions*, in this table.)
Select	This button is automatically enabled if the permission choices selected by the Administrator do not match the default access level choices for Admin or User.
Permissions	1. Checking *Administration* gives a User administration privileges, which allows him to set up and modify the KN2108 / KN2116's Administration page settings. 2. Checking *Windows Client* allows a user to access the KN2108 / KN2116 via the Windows Client software. By default, all users may access the KN2108 / KN2116 via the Windows Client software. 3. Checking *Log* allows a User to view and query the log file. The *Log* and *Log Server* buttons appear on the Main web page of Users who have Log permission (see *Web Page Buttons*, page 58). 4. Checking *Java client* allows a User to access the KN2108 / KN2116 via the Java Client software. 5. Checking *Power Manager* allows a User to connect to Power on the Net™ devices. The *PON* button appears on the Main web page of Users who have Power Manager permission (see *Web Page Buttons*, page 58).

(Continues on next page.)

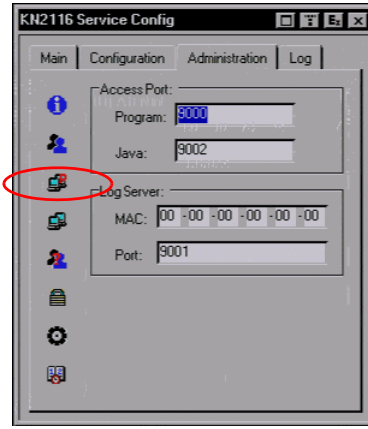
(Continued from previous page.)

Heading	Description
Port Access	This function allows the Administrator or a User with Administration permission to define the selected User's access to the computers on a Port-by-Port basis. For each User profile, select a port and click it to cycle through the choices: **Full:** The user can view the remote screen and can perform operations on the remote system from his keyboard and monitor. **View:** A diagonal line through the port icon indicates the port access is View. The user can only view the remote screen; he cannot perform any operations on it. **Null:** No access rights - an X through the port icon indicates no port access. The Port will not show up on the User's list on the Main Screen. Repeat until access rights have been set for all the ports. The default is Full for all users on all Ports.



Service Configuration

The Service Configuration dialog is composed of two main panels: Access Port and Log Server:



Access Port

As a security measure, if a firewall is being used, the Administrator can specify the port numbers that the firewall will allow, and set the firewall accordingly. Users must specify the port number when they log in to the KN2108 / KN2116. If an invalid port number (or no port number) is specified, the KN2108 / KN2116 will not be found.

An explanation of the fields is given in the table below:

Field	Explanation
Program	This is the port number that must be specified when connecting from the Windows Client software program. Valid entries are from 1024-60,000. The default is 9000.
Java	This is the port number used for Java Client connections. Valid entries are from 0-65535. The default is 9002

Note: 1. If there is no firewall (on an Intranet, for example), it doesn't matter what these numbers are set to, since they have no effect.

2. The access ports cannot have the same value. You must set a different value for each one.

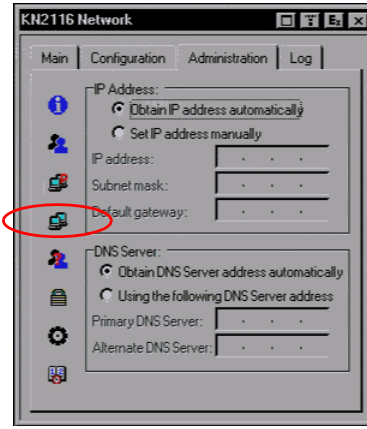
Log Server

Important transactions that occur on the KN2108 / KN2116, such as logins and internal status messages, are kept in an automatically generated log file. You specify the MAC address and a port number for the computer that the Log Server resides on in this panel. The valid port range is 1024-60000. The default port number is 9001.

Installation and operation of the Log Server is discussed in Chapter 8. The Log File is discussed on page 89.

Network

The Network dialog is used to specify the KN2108 / KN2116's network environment. The box is divided into two panels: IP Address; and DNS Server.



IP Address

The KN2108 / KN2116 can either have its IP address assigned dynamically (DHCP), or it can be given a fixed IP address.

- For dynamic IP address assignment, select the *Obtain an IP address automatically*, radio button.
- To specify a fixed IP address, select the *Set IP address manually*, radio button and fill in the IP address.

DNS Server

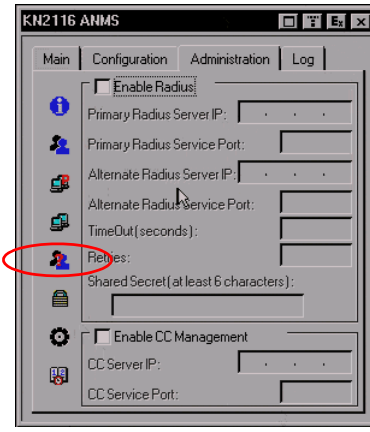
The KN2108 / KN2116 can either have its DNS Server address obtained automatically, or it can be assigned manually.

- For automatic DNS Server address assignment, select the *Obtain DNS Server address automatically*, radio button.
- To specify the DNS Server address manually, select the *Use the following DNS Server* radio button, and fill in the addresses for the Primary and Alternate DNS servers.

Note: Specifying at the primary DNS Server address is mandatory. The alternate DNS Server address is optional.

ANMS

The Authentication Network Management Service dialog box allows you to set up login authorization management from external sources. It is divided into two main panels, as described below:



RADIUS Settings

If you want to allow authorization for the KN2108 / KN2116 through a RADIUS server, do the following:

1. Check **Enable Radius**.
2. Fill in the IP addresses and Service Ports for the Primary and Alternate RADIUS servers.
3. Set the time in seconds that the KN2108 / KN2116 waits for a RADIUS server reply before it times out in the Timeout field.
4. Set the number of RADIUS retries allowed in the Retries field.
5. Key the *Shared Secret* character string that you want to use for authentication between the KN2108 / KN2116 and the RADIUS Server in this field.

Note: Set the access rights for each user on the RADIUS server according to the information in the table on the next page.

RADIUS Server Access Rights Table:

Character	Meaning
C	Grants the user administrator privileges, allowing the user to configure the system.
W	Allows the user to access the system via the Windows Client program.
J	Allows the user to access the system via the Java Client program.
P	Allows the user to access an attached Power Over the Net™ device.
L	Allows the user to access log information via the user's browser.
PN	Restricts the user from accessing specified ports on the OSD port list. **Syntax:** PN/1/2/3/4 (etc.)
PV	Limits the User to only being able to view specified ports on the OSD port list. **Syntax:** PV/1/2/3/4 (etc.)
UHK	Defines the OSD Hotkey (see page 80). **UHK0:** Scroll Lock + Scroll Lock **UHK1:** Ctrl + Ctrl
UOL	Defines the OSD List Function (see *The Main Page*, and, *Quick View Ports*, page 29). **UOL0:** All **UOL1:** Powered On **UOL2:** Quick View **UOL3:** Quick View +Powered On
UODM	Selects how the Port ID displays (see page 80). **UODM0:** Port Number + Port Name **UODM1:** Port Number **UODM2:** Port Name
UODT	Determines the length of time in seconds that the Port ID displays on the monitor after a port change (see page 80). **Syntax:** UODT*n* (where *n* represents a number from 0-255)
UBUZ	Turns the beeper off or on (see page 80. **UBUZ0:** Beeper Off **UBUZ1:** Beeper On
ULT	Sets the Logout Timeout. When there is no input from the user for the amount of time set with this function, the user is automatically logged out and will need to log in again. The valid Logout Timeout range is from 0-180 minutes. **Syntax:** ULT*n* (where *n* represents a number from 0 to 180 minutes.

(Continues on next page.)

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Character	Meaning
USM	Selects which computers the User can access under Auto Scan Mode (see *Scan Select*, page 80). **USM0:** All **USM1:** Powered On **USM2:** Quick View **USM3:** Quick View + Powered On
UST	Determines the length of time in seconds the KVM focus dwells on each port in Auto Scan Mode (see *Scan Duration*, page 80). **Syntax:** UST*n* (where *n* represents a number from 0-255)

Note: 1. Characters are not case sensitive. Upper or lower case works equally well.

2. Characters are comma delimited.

3. An invalid character in the configuration string will prohibit access to the KN2108 / KN2116 for the user.

RADIUS Server Access Rights Examples:

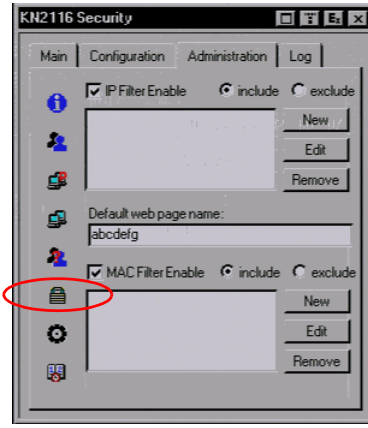
c,w,p	User has administrator privileges; user can access the system via the Windows Client; user can manage the attached Power over the NET device.
w,j,l	User can access the system via the Windows Client; user can access the system via the Java Client; user can access log information via the user's browser.

CC Management Settings

If you want to allow authorization for the KN2108 / KN2116 through a CC (Control Center) server, check *Enable CC Management* and fill in the CC Server's IP address and the port that it listens on in the appropriate fields.

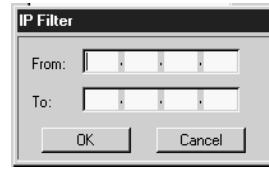
Security

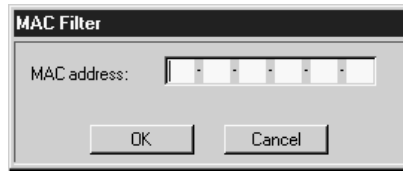
The Security page controls access to the KN2108 / KN2116.



IP and MAC Filtering

- If any filters have been configured, they appear in the IP Filter and/or MAC Filter list boxes.
- IP and MAC Filters control access to the KN2108 / KN2116 based on the IP and/or MAC addresses of the computers attempting to connect. A maximum of 100 IP filters and 100 MAC filters are allowed. To enable IP and/or MAC filtering, **Click** to put a check mark in the *IP Filter Enable* and/or *MAC Filter Enable* checkbox.
  - If the include button is checked, all the addresses within the filter range are allowed access; all other addresses are denied access.
  - If the exclude button is checked, all the addresses within the filter range are denied access; all other addresses are allowed access.
- To add a filter, click **New**. A dialog box similar to the ones below appears:





Note: Each IP filter can consist of a single address, or a range of addresses. To filter a single IP address, key in the same address in both the From and To fields. To filter a continuous range of IP addresses, key in the start of the range in the From field; key in the end of the range in the To field.

After you specify the filter addresses, click OK.

- To delete a filter, select it in the IP Filter and/or MAC Filter list boxes and click **Remove**.
- To modify a filter, select it in the IP Filter and/or MAC Filter list boxes and click **Edit**. The Edit dialog box is similar to the New dialog box. When it comes up, simply delete the old address and replace it with the new one.

Default Web Page Name

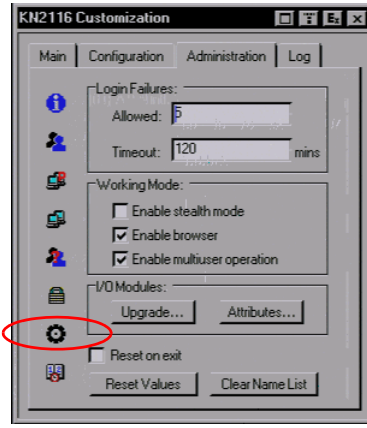
- The Default web page name entry field lets the Administrator specify a login string (in addition to the IP address) that the user must include when he accesses the KN2108 / KN2116 with a browser. For example:

  ```
  192.168.0.126/abcdefg
  ```

- The user must include the forward slash and the string along with the IP address. For security purposes, we recommend that you change this string from time to time.

Note: If no login string is specified here, anyone will be able to access the KN2108 / KN2116 login page using the IP address alone. This makes your installation less secure.

Customization



The Customization dialog box is arranged in four major sections, as described below:

Login Failures

- **Allowed:** sets the number of consecutive failed login attempts that are permitted from a remote computer.
- **Timeout:** sets the amount of time a remote computer must wait before attempting to login again after it has exceeded the number of allowed failures.

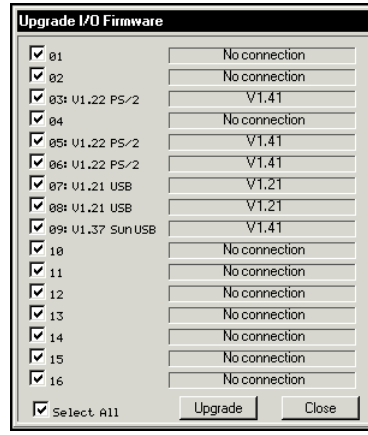
Working Mode

- If *Stealth Mode* is enabled, the KN2108 / KN2116 cannot be pinged.
- To permit browser access to the KN2108 / KN2116, click to put a check mark in the *Enable Browser* checkbox. If browser access is not enabled, users will not be able to log into the unit via their browsers.
- If *Multiuser Operation* is enabled, up to 32 users can simultaneously access the KN2108 / KN2116.

I/O Modules

Upgrade:

Upgrade allows you to upgrade the I/O firmware of selected ports. When you click *Upgrade...*, a dialog box similar to the one below appears:



1. Select the ports you want to upgrade.

   Note: The port's status is displayed in the field to its right.

2. Click **Upgrade** to perform the upgrade.

   Note: To leave the dialog box without performing an upgrade, click **Close**.

Attributes:

Attributes allows you to set attribute parameters for each of the ports. When you click *Attributes...*, a dialog box similar to the one below appears:

Setting I/O Module Attributes
Port Comp. OS Lang. Share
1 Short Win English Share
2 Short Win English Share
3 Short Win English Share
4 Short Win English Share
5 Short Win English Share
6 Short Win English Share
7 Short Win English Share
8 Short Win English Share
9 Short Win English Share
10 Short Win English Share
11 Short Win English Share
12 Short Win English Share
13 Short Win English Share
14 Short Win English Share
15 Short Win English Share
16 Short Win English Share
Timeout(0-255s) 3
Apply
Cancel

- The port numbers are listed in the column on the left. The port's attributes are shown to its right. The purpose of each attribute is described below:

Attribute	Purpose
Cable (Comp.)	Specifies the Cat5 cable length that is used to connect the computer to the port. Choices are Short (less than 20m), Medium (20-30m), and Long (greater than 30m). The default is Short.
OS	Specifies the operating system that the computer on the connected port is using. Choices are Windows, MacOS, and Sun Solaris. The default is Windows.
Lang	Selects the OS language that the computer on the connected port is using. Choices are English, French, and Japanese. The default is English.
Share	Selects the Share Mode for the port. Choices are Exclusive, Occupy, and Share, as explained in the *Share Attribute Table*, that follows.

(Continues on next page.)

- The *Timeout* field sets a time threshold for users on ports whose Share Mode has been set to *Occupy* (see *Occupy:*, page 50). If there is no activity from the user occupying the port for the amount of time set here, the user is timed out and the port is released. The first user to send keyboard or mouse input after the port has been released gets to occupy the port.

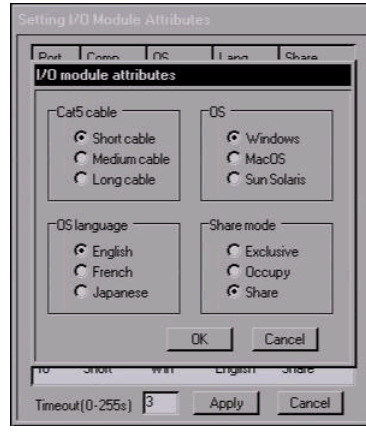
  Input a value from 0 to 255 seconds. The default is 3 seconds. A setting of 0 causes the port to be released the instant there is no input.

Share Mode Attribute Table:

Attribute	Action
Exclusive:	The first user to occupy the port has exclusive control over it. No other user can view or access it.
Occupy:	The first user to occupy the port has control over it. Up to 31 additional users can view its video output, however. The *Timeout* function discussed on page 50 applies to ports that have this setting.
Share:	Allows up to 32 users to simultaneously share control over the port. User input is placed in a queue and executed on a first sequentially. In addition, a user can access the KN2108 / KN2116's *Message Board* function to gain control of the keyboard and mouse, or keyboard, video, and mouse of a Share designated port. See *The Message Board*, page 76.

Changing an Attribute:

To change an attribute for a port, double click it. A screen similar to the one below appears:



1. Select the desired attributes for the port, then click **OK**. You return to the previous screen (Setting I/O Module Attributes). To exit without saving your changes, click **Cancel**.
2. When you return to the previous screen, click **Apply** to keep your changes. To exit without saving your changes, click **Cancel**.

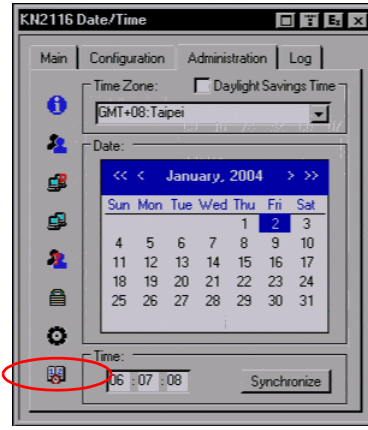
Miscellaneous

The functions performed by the remaining elements at the bottom of the screen are described in the table, below:

Parameter	Explanation
Reset on Exit	Placing a check here causes the KN2108 / KN2116 to reset itself and implement all the new changes when you log out. Following the reset, wait approximately 30 to 60 seconds before logging back in. For example, if you change the IP address in the Network dialog box, you must open this page and enable Reset on exit before logging out. Otherwise, the change will not take effect
Reset Values	Clicking this button undoes all changes that have been made to the Configuration and Administration pages (except for the Port Names that were assigned to the Ports - see *Port Names*, page 32) and returns the parameters to the original factory default settings (see *OSD Factory Default Settings*, page 119).
Clear Name List	This function is similar to Reset Values. The difference is that it also clears the Port Name settings at the same time that it undoes all changes and returns the setup to the original factory default settings.

Date/Time

The Date/Time dialog box lets the Administrator set up the KN2108 / KN2116's time parameters:



- To establish the time zone that the switch is located in, drop down the Time Zone list and choose the city that most closely corresponds to where it is at.
- To set the year and day, use the Calendar graphic.
  - Clicking << or >> moves you backward or forward a year.
  - Clicking < or > moves you backward or forward a month.
  - After you have set the year and month, click on the day.
- To set the time, use the 24 hour HH:MM:SS format.
- Click **Synchronize** to save your changes. To abandon your changes, leave the screen without clicking **Synchronize** .

Upgrading the Firmware

As new versions of the KN2108 / KN2116 firmware become available, they can be downloaded from our website. Check the web site regularly to find the latest information and packages.

Note: Although upgrading the firmware isn't on the OSD Administration page, it is an administration function, so we will discuss it in this chapter.

To upgrade the firmware, do the following:

1. Download the new firmware file to a computer that is not part of your KN2108 / KN2116 installation.
2. From that computer, open your browser and log in to the KN2108 / KN2116.
3. Click the *Firmware* icon (see p. 56) to open the Firmware configuration dialog box:

4. Click **Browse**; navigate to the directory that the new firmware file is in and select the file.
5. Click **Upload**.
6. After the upload completes, click the Logout icon at the top right of the web page to exit and reset the KN2108 / KN2116.

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Chapter 4
Browser Operation

Overview

KN2108 / KN2116 computer control and switching operations are governed by an On Screen Display (OSD) interface. The OSD can be accessed remotely with a Windows-based client, or a Java-based client. To connect to the switch and bring up its OSD you must log in from an internet browser.

Logging In

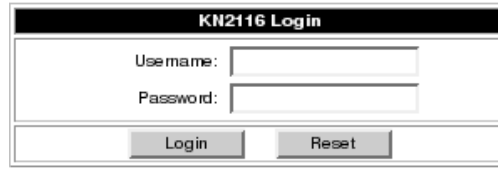
To log in from an internet browser:

1. Open the browser and specify the IP address of the KN2108 / KN2116 you want to access in the browser's URL location bar.

Note: If you don't know the IP address, get it from the administrator.

2. When the Security Alert dialog box appears, accept the certificate – it can be trusted. (See *Trusted Certificates*, page 113, for details.)

   A login page appears:

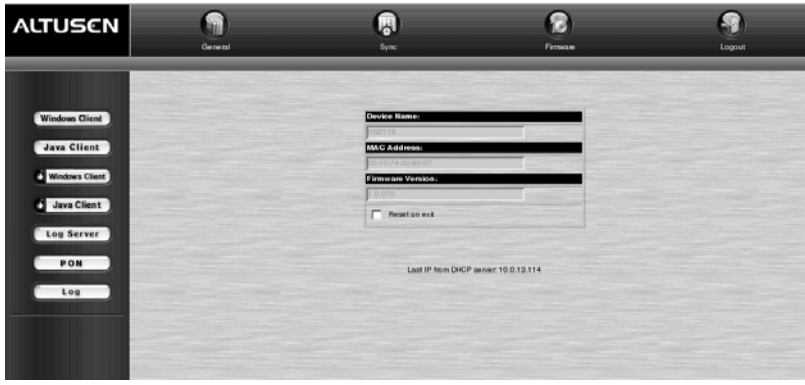


3. Provide a valid Username and Password (set up by the administrator), then Click Login to continue.

Note: 1. If you supply an invalid login, the authentication routine will return a message stating, *Invalid Username or Password. Please try again*. If you exceed the number of login failures set by the administrator, a message stating that *The page cannot be displayed*, appears. This is done to confuse and discourage hackers from trying to discover a valid Username and Password. If you see this message, try logging in again being careful with the Username and Password.

2. If you are the Administrator and are logging in for the first time, use the default Username: *administrator*; and the default Password: *password*. For security purposes, we strongly recommend you remove these and give yourself a unique Username and Password (see *User Management*, page 36).

After you have successfully logged in, the KN2108 / KN2116 Main Web Page appears with the General dialog box displayed:



Note: This is the same screen that appears whenever you click the General icon at the top left of the page.

Web Page Layout

The General Dialog Box

An explanation of the dialog box fields is given in the table below:

Field	Purpose
Device Name:	To make it easier to manage installations that have more than one KN2108 / KN2116, each one can be given a name. The name that was assigned by the administrator to this unit displays here.
MAC Address:	The KN2108 / KN2116's MAC Address displays here.
Firmware Version	Indicates the KN2108 / KN2116's current firmware version level. New versions of the firmware can be downloaded from our website as they become available, (see *Upgrading the Firmware*, page 53).
Reset on Exit:	To save any configuration/administration changes that you have made in the OSD, place a check here to have the KN2108 / KN2116 implement the changes you have made and reset itself when you log out. **Note:** This checkbox is only enabled for users who have administration privileges.

Web Page Icons

The purpose of the other icons at the top of the web page are explained in the table below:

Icon	Function
Sync	Click this icon to sync the KN2108 / KN2116's time with your computer's time: ◆ If both are in the same timezone, the device's time is changed to match the computer's time. ◆ If they are in different timezones, the device's time is changed to match the computer's, except the timezone difference is still maintained.
Firmware	Click this icon to install new versions of the KN2108 / KN2116's firmware. See page 53 for details. **Note:** The Firmware icon only displays for users with administrative permission. It doesn't appear on the web pages of users who don't have the proper permission.
Logout	Click this icon to log out and end your KN2108 / KN2116 session.

Web Page Buttons

The purpose of the buttons at the left of the web page are explained in the table below:

Icon	Function
	Click this button to download the Windows Client software to remotely control the connected server (or servers via a KVM switch). **Note:** This Windows Client isn't permanent. It is removed when you exit the program. You must download a new Windows Client each time you log in from your browser.
	For platform independence, the Java client allows users that have Java installed to connect to the KN2108 / KN2116. Click this button to download the Java Client software to remotely control the connected server (or servers via a KVM switch). **Note:** This Java Client isn't permanent. It is removed when you exit the program. You must download a new Java Client each time you log in from your browser.
	In some instances, administrators don't want the KN2108 / KN2116 to be accessible by browser. Clicking this button allows the user to download the API version of the Windows Client. Once a user has downloaded the API program, the administrator can turn off browser access. API operation is discussed in Chapter 9.
	In some instances, administrators don't want the KN2108 / KN2116 to be accessible by browser. Clicking this button allows the user to download the API version of the Java Client. Once a user has downloaded the API program, the administrator can turn off browser access. API operation is discussed in chapter 9.
	Clicking this button allows the administrator to download and install the Log Server application. See Chapter 8 for Log Server details.
	If a Power Over the NET™ (PON) module is connected to the KN2108 / KN2116, clicking this button brings up its interface.
	All the events that take place on the KN2108 / KN2116 are recorded in a log file. Clicking this icon displays the contents of the log file.

Chapter 5
The Windows Client

Activating the Browser OSD

After you have successfully logged in (see *Logging In*, page 55), to activate the browser based Windows Client OSD do the following:

1. Click the *Windows Client* button (the one ***without*** the arrow) at the left of the web page.

   Note: 1. You must have DirectX 7.0 or higher installed on your computer. If not, the Windows Client will not load. If you don't already have it, DirectX is available for free download from Microsoft's web site: http://www.microsoft.com/downloads.

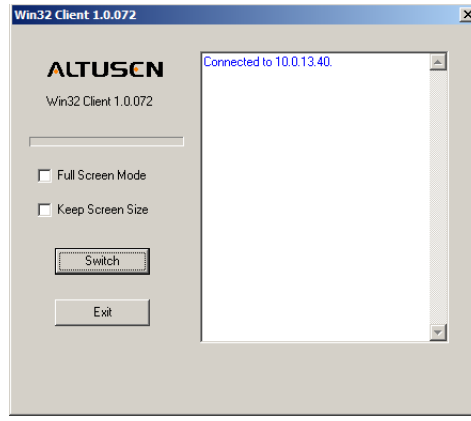
   2. The Windows Client button with the arrow is for running the AP version of the Windows Client (see *AP Operation*, page 99).

2. Accept the security certificates.
3. When the browser dialog asks whether to run or save the program file, click **Run**.

   Note: 1. If the browser cannot run the file, save it to disk, instead. Then, with your browser still open to the KN2108 / KN2116 web page, run the file from your disk.

   2. If you use the save to disk method, for security purposes, you cannot simply run a previously downloaded version of the program. Each time you want to access the KN2108 / KN2116, you must log in to the web page with a valid username and password to download a fresh copy of the program.

4. When a connection to the KN2108 / KN2116 has been established a screen similar to the one below appears:

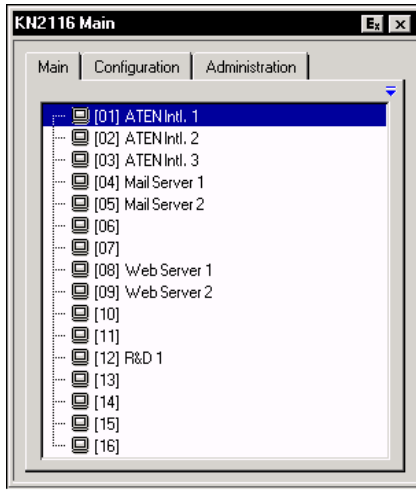


- If *Full Screen Mode* is enabled (there is a checkmark in the box), the remote display fills the entire screen of your local monitor.
- If *Full Screen Mode* is not enabled (there is no checkmark in the box), the remote display appears as a window on your desktop. If the remote screen is larger than what is able to fit in the window, move the mouse pointer to the screen border that is closest to the area you want to view and the screen will scroll.
- If *Keep Screen Size* is not enabled (there is no checkmark in the box), the remote screen is resized to fit the resolution of your local monitor.
- If *Keep Screen Size* is enabled (there is a checkmark in the box), the remote screen is not resized.
  - If the remote resolution is smaller, its display appears like a window centered on your screen.
  - If the remote resolution is larger, its display is centered on your screen. To access the areas that are off screen, move the mouse to the corner of the screen that is closest to the area you want to view and the screen will scroll.

5. Click **Switch** to bring up the OSD.

The Main Page

The OSD comes up with the Main page visible:



- The Main Page lists all of the KN2108 / KN2116's ports. You access the computers connected to its ports by selecting them on this page. Details regarding the meaning and operation of the main page elements are provided in the Administration chapter (see *The Main Page*, page 29).
- There are two buttons at the upper right of the dialog box:
  - Clicking the left button closes the OSD display and logs you out of the KN2108 / KN2116 session.
  - Clicking the right button closes the OSD display but does not log you out of the session. You can bring the display back with the OSD hotkeys (see *OSD Hotkey*, page 80).

Note: 1. The Administration tab is disabled for users who don't have administration permission. For those who do have administration permission, administration operations are discussed in Chapter 3.

2. There is a small *Windows Client Control Panel* at the lower right. The control panel is discussed in detail on p. 69.

Port Operation

Select a port on the OSD Main Screen either by moving the highlight bar to it with the Up and Down Arrow keys and pressing **Enter**, or by Double Clicking it. Once you select a port, its screen displays on your monitor, and your keyboard and mouse input affects the remote system.

The OSD Toolbar

The OSD provides a toolbar to help you control the KN2108 / KN2116 from within the captured port. To bring up the toolbar, tap the OSD Hotkey (Scroll Lock or Ctrl), twice. The toolbar appears at the upper left corner of the screen:

Depending on the settings that were selected for ID Display (see page 80), the Port Number and/or the Port Name display at the right of the toolbar. The meanings of the toolbar icons are given in a table on page 63.

Note: When the toolbar displays, mouse input is confined to the toolbar area and keyboard input has no effect. To carry out operations on the computer connected to the port, you must recall the OSD and select the port again.

Recalling the OSD

To dismiss the toolbar and bring back the OSD display (the Main, Configuration, and Administration pages), tap the OSD Hotkey once. The OSD Toolbar disappears, and the main OSD display reappears.

OSD Hotkey Summary Table

The following table presents a summary of the OSD Hotkey actions. See *OSD Hotkey*, page 80 to set the OSD Hotkey.

To...	When...	Do This...
Open the OSD Toolbar	The OSD Toolbar is not open	Click the OSD Hotkey twice
Open the OSD	The OSD Toolbar is open	Click the OSD Hotkey once
Open the OSD	The OSD Toolbar is not open	Click the OSD Hotkey three times

The Toolbar Icons

The meanings of the toolbar icons are explained in the table below.

Icon	Purpose
	Drag this icon to move the toolbar to a different location.
	Click to skip to the first accessible port on the entire installation without having to invoke the OSD.
	Click to skip to the first accessible port previous to the current one without having to invoke the OSD.
	Click to begin Auto Scan Mode. The KN2108 / KN2116 automatically switches among the ports that were selected for Auto Scanning under the Scan Select function (see page 80). This allows you to monitor their activity without having to switch among them manually.
	Click to skip from the current port to the next accessible one without having to invoke the OSD.
	Click to skip from the current port to the last accessible port on the entire installation without having to invoke the OSD.
	Click to bring up the OSD.
	Click to close the toolbar.
	Click to logout and exit the Windows Client application.
	Click to invoke Panel Array Mode (see *Panel Array Mode*, page 66).
	Clicking this button cycles you through the I/O module's compensation mode choices (Short, Medium, Long) depending on the length of cable used to connect a device to the KN2108 / KN2116. The length of the line in the icon changes to indicate which choice is selected.

Note: The administrator selects which ports are accessible to each user with the User Management function, (see p. 36 for details).

Hotkey Operation Overview

Hotkeys allow you to provide KVM focus to a port directly from the keyboard. The KN2108 / KN2116 provides the following hotkey features:

- Auto Scanning
- Skip Mode Switching

Note: 1. The hotkeys are: **A** and **P** for Auto Scanning; and the **Arrow Keys** for Skip Mode Switching.

2. In order for hotkey operations to take place, the OSD toolbar must be visible (see *Port Operation*, page 62).

3. When the OSD toolbar is visible, the hotkeys cannot be used for normal purposes. To use the hotkey keys for normal purposes, you must close the OSD toolbar.

Auto Scanning

The Auto Scan function automatically switches among all the ports that are accessible to the currently logged on user at regular intervals, so that he can monitor their activity automatically. (See *Scan Select*, page 80, for information regarding accessible ports).

Setting the Scan Interval:

The Scan Interval (the amount of time Auto Scan dwells on each port) is set with the Scan Duration setting (see *Scan Duration*, page 80).

Invoking Auto Scan:

To start Auto Scanning, with the OSD toolbar showing, tap the A key. The Auto Scan function cycles through the ports in order - starting from the first port on the installation. An **S** appears in front of the Port ID Display to indicate that the port is being accessed under Auto Scan Mode.

Pausing Auto Scan:

While you are in Auto Scan Mode, you can pause the scanning in order to keep the focus on a particular computer by pressing **P**. During the time that Auto Scanning is paused, the **S** in front of the Port ID blinks On and Off.

Pausing when you want to keep the focus on a particular computer can be more convenient than exiting Auto Scan Mode because when you *Resume* scanning, you start from where you left off. If, on the other hand, you were to exit and then restart Auto Scan Mode, the scanning would start over from the very first computer on the installation.

To *Resume* Auto Scanning after a pause, press any key except [Esc] or the [Spacebar]. Scanning continues from where it left off.

Exiting Auto Scan Mode:

While Auto Scan Mode is in effect, ordinary keyboard functions are suspended. You must exit Auto Scan Mode in order to regain normal control of the keyboard. To exit Auto Scan Mode press [Esc] or the [Spacebar]. Auto Scanning stops when you exit Auto Scan Mode.

Skip Mode

Skip Mode allows you to switch ports in order to monitor the computers manually. You can dwell on a particular port for as long or as little as you like - as opposed to Auto Scanning, which automatically switches after a fixed interval. The Skip Mode hotkeys are the four Arrow keys. Their operation is explained in the table below:

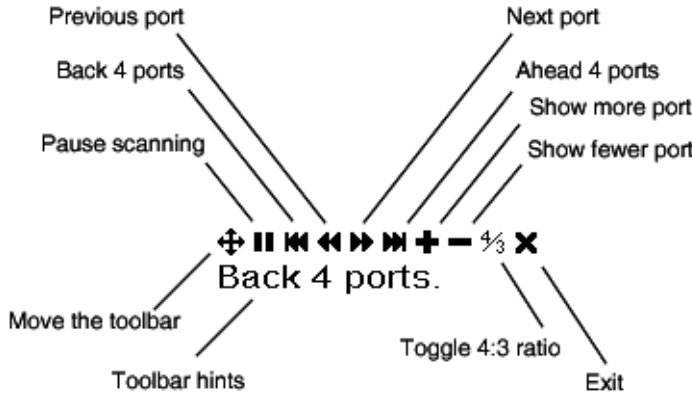
Arrow	Action
←	Skips from the current port to the first accessible port previous to it. (See *Scan Select*, page 80, for information regarding accessible ports.)
→	Skips from the current port to the first accessible port that comes after it.
↑	Skips from the current port to the very first accessible port on the installation.
↓	Skips from the current port to the very last accessible port on the installation.

Panel Array Mode

Clicking the OSD Toolbar's *Panel* icon invokes Panel Array Mode. Under this mode, the OSD divides your screen into a 2 x 4 grid of 8 panels (KN2108), or a 4 x 4 grid of 16 panels (KN2116):

- Each panel represents one of the KN2108 / KN2116's ports. Starting with Port 1 at the upper left; going from left to right; top to bottom; Port 8 (KN2108), or Port 16 (KN2116), is at the lower right.
- When the Array is first invoked, it scans through each of the ports that were selected for Auto Scanning under the Configuration page's *Scan Select* function (see page 80), and displays information about the port (port name, resolution, on line status, port access status), at the bottom of the panel.
- The number of panels in the array (16, 9, 4, or 1) can be selected by clicking **Show More Ports**, and **Show Fewer Ports** on the panel array toolbar (see the following page).
- If the computer connected to a port is on line, its screen displays in its panel, otherwise the panel is blank.
- Only ports that are accessible to the currently logged in user (see *Port Access*, page 38), are displayed. For ports that are not accessible, the panel is blank.
- If you move the mouse pointer over a panel, information about the port displays at the bottom of the panel.

- You can access a computer connected to a port by moving the mouse pointer over its panel and clicking. You switch to the computer exactly as if you had selected it from the OSD Main screen.
- The panel array toolbar, at the lower right of the screen, provides shortcut navigation and control of the panel array as described in the diagram below:



Multiuser Operation

The KN2108 / KN2116 supports multiuser operation. Up to 32 users can log in at the same time. When multiple users simultaneously access the KN2108 / KN2116 switch from remote consoles, the rules of precedence that apply are shown in the following table:

Operation	Rule
General	Once a user invokes the OSD, no other user can invoke it until the original user closes it.
Auto Scan Mode	If a user has invoked Auto Scan Mode (see page 64), but the OSD has not been invoked, another user can interrupt Auto Scan Mode by invoking the OSD.
Panel Array Mode	◆ Once a user has invoked Panel Array Mode (see page 66), all successive users automatically enter Panel Array Mode. Panel Array Mode continues until the original user stops it. (Administrators can override Panel Array Mode, however.) ◆ Only the user who starts Panel Array Mode can use the Skip Mode (see page 65), function. ◆ Only the user who starts Panel Array Mode can switch ports. Other users automatically switch to the ports that the original user selects. However, if an individual user does not have access rights to the port that the original users switches to, he will not be able to view that. ◆ Individual users can increase or decrease the number of panels they wish to view in Panel Array Mode; however, the picture quality may decrease as the number of panels decreases.

Note: 1. The KN2108 / KN2116 only supports two remote buses. The first, third, fifth, etc., users to log in are all on one bus; the second, fourth, sixth, etc., users to log in are all on the other bus. When a user changes to a port everyone on the same bus changes to that port, as well.

2. We recommend that the user who starts Panel Array Mode set it to display at least four panels. Otherwise, it is possible that the other users may only receive part of the picture.

Windows Client Control Panel

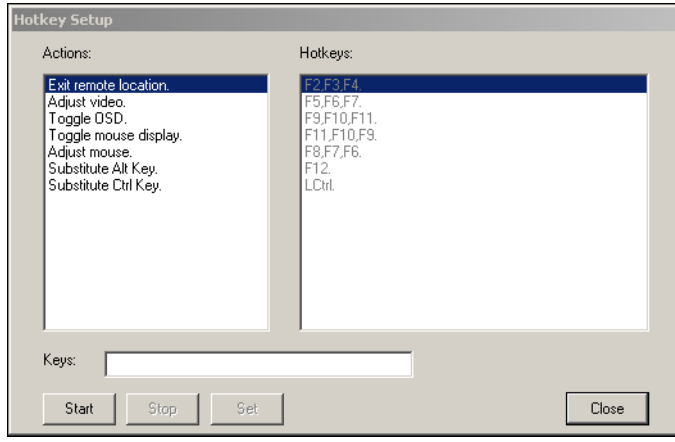
The Windows Client Control Panel consists of an icon bar at the top, with two text bars below it (refer back to the figure on page 61). Initially, the text bars display the video resolution and IP address of the device at the remote location. As the mouse pointer moves over the icons in the icon bar, however, the text bar information changes to describe the icon's function. The functions that the icons perform are described in the table below.

Icon	Function
	Drag the OSD display to another position on the screen by clicking and holding on the hand while you move the mouse.
	Click to bring up the Hotkey Setup dialog box (see page 70).
	Click to bring up the Video Adjustment dialog box (see page 73). Right click to do a fast Auto Sync (see *Auto-Sync*, page 74).
	Click to open the message board (see *The Message Board*, page 76).
	Click to exit Windows Client control of the remote unit.
(Space)	Hover over the empty space on the Control Panel to see the video resolution and IP address of the device at the remote location.
	These LEDs show the Num Lock, Caps Lock, and Scroll Lock status of the remote computer. Click on an icon to toggle its status. **Note:** When you first connect, the LED display may not be accurate. To be sure, click on the LEDs to set them.

The *Hotkey Setup*, *Video Adjustment*, and *Panel Array* functions are discussed in the sections that follow.

Hotkey Setup

Various configuration actions related to the keyboard, video, and mouse can be performed via hotkey combinations. The Hotkey setup utility is accessed by clicking the Keyboard icon on the Control Panel. The actions performed by the Hotkeys are listed in the left column; the currently defined keys that invoke the actions are shown in the column to the right.



Hotkey Actions:

An explanation of the actions is given in the table, below:

Action	Explanation
Exit remote location	Breaks the connection to the KN2116 and returns you to local operation.
Adjust Video	Brings up the video adjustment utility (see page 73).
Toggle OSD	Toggles the OSD display Off and On.
Toggle mouse display	If you find the display of the two mouse pointers (local and remote) to be confusing or annoying, you can use this function to shrink the non-functioning pointer down to a barely-noticeable tiny circle - which can be ignored. Since this function is a toggle, use the hotkeys again to bring the mouse display back to its original configuration.
Adjust mouse	This utility synchronizes the local and remote mouse movements following a video resolution change. After invoking this utility, simply click the local mouse pointer on top of the remote mouse pointer.
Substitute Alt key	Although all other keyboard input is captured and sent to the KN2116, [Alt + Tab] and [Ctrl + Alt + Del] work on your local computer. In order to implement their effects on the remote system, a function key is substituted for the Alt key. If you substitute the F12 key, for example, you would use [F12 + Tab] and [Ctrl + F12 + Del].
Substitute Ctrl key	If your local computer captures Ctrl key combinations, preventing them from being sent to the remote system, you can implement their effects on the remote system by specifying a function key to substitute for the Ctrl key. If you substitute the F11 key, for example, pressing [F11 + 5] would appear to the remote system as [Ctrl + 5].

Note: To invoke an action, you must press and release the keys one key at a time.

Hotkey Configuration:

If you find the default Hotkey combinations inconvenient, you can configure them to whatever suits your taste, as follows:

1. Highlight the Action, then click **Start.**
2. Key in the Function keys (one at a time). The key names appear in the Key field as you press them.
3. When you have finished keying in your sequence, click **Stop.**
4. Click **Set**.

Note: 1. You can use the same function keys for more than one action, as long as the first key is not the same. For example, you can use F1 F2 F3 for one action, and F2 F1 F3 for another, but not F1 F3 F2.

2. When the KN2108 / KN2116 is being accessed with Win 98 under *Full Screen Mode*, if you mistakenly press [Ctrl + Alt + Del], you will have to exit the Windows Client (by clicking the arrow on the Control Panel), and restart the Windows Client from the Main Web Page.

Mouse Synchronization:

Until you close the KN2108 / KN2116 connection, mouse movements have no effect on your local system, but are captured and sent to the remote system, instead.

From time to time, especially if you change video resolution, the local mouse movement may no longer be synchronized with the remote system's mouse pointer. There are three methods that can be used to bring the two pointers back into sync:

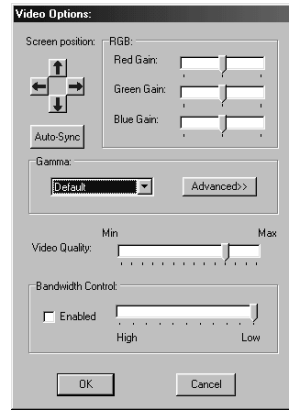
- Moving the mouse pointer into the Control Panel and then moving it back out again.
- Performing an *Auto Sync* with the Video Adjustment function (see*Video Settings*, page 73 for details).
- Invoking the *Adjust Mouse* function (see *Adjust mouse*, page 71 for details).

If none of the above procedures resolve the problem, see *Additional Mouse Synchronization Procedures*, page 116.

Video Settings

General:

You can adjust the placement and the picture quality of the remote screen (as displayed on your local monitor) with the Video Options function. To do so, either click on the Hammer icon on the Control Panel, or use the Adjust Video hotkeys (see page 71). The following screen appears:



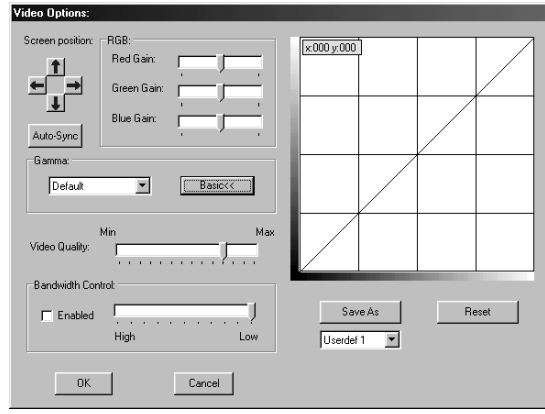
The meanings of the adjustment options are given in the table below:

Option	Usage
Screen Position	Adjust the horizontal and vertical position of the remote computer window by clicking the Arrow buttons.
Auto-Sync	Click Auto-Sync to have the utility detect the vertical and horizontal offset values of the remote screen and automatically synchronize it with the local screen. If the local and remote mouse pointers are out of sync, in most cases performing this function will bring them back into sync. **Note:** This function works best with a bright screen. If you are not satisfied with the results, use the *Screen position* arrows to position the remote display manually.
RGB	Drag the slider bars to adjust the RGB (Red, Green, Blue) values. When an RGB value is increased, the RGB component of the image is correspondingly increased.
Gamma	This section allows you to adjust the video display's gamma level. This function is discussed in detail in the next section, *Gamma Adjustment*.
Video Quality	Drag the slider bar to adjust the overall Video Quality. Values can be from 20 to 100. The larger the value, the clearer the picture and the more video data goes through the network. Depending on the network bandwidth, a high value may adversely effect response time.
Bandwidth Control	This setting adjusts the ratio between picture quality and network speed. For slow data connections, drag the slider bar to a lower setting to decrease the amount of video data transferred. This ensures screen refresh at workable speeds.

Gamma Adjustment

If it is necessary to correct the gamma level for the remote video display, use the *Gamma* function of the Video Adjustment dialog box.

Under *Basic* configuration, there are 7 preset levels to choose from. Drop down the list box and choose the most suitable one. For greater control, clicking the *Advanced* button brings up the following dialog box:

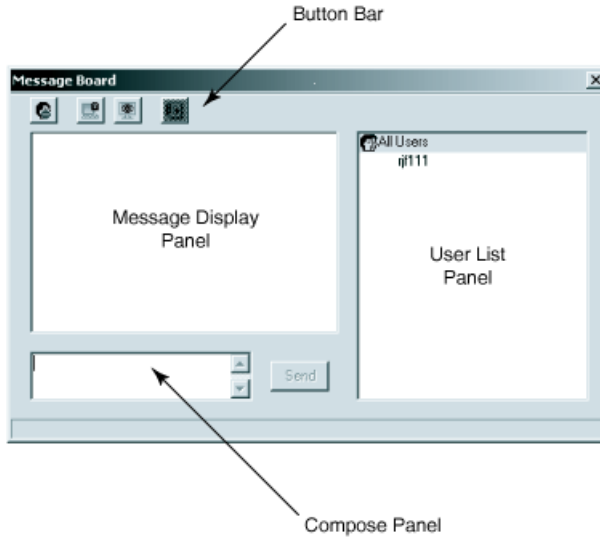


- Click and drag the diagonal line at as many points as you wish to achieve the display output you desire.
- Click **Save As** to save up to four configurations derived from this method. Saved configurations can be recalled from the list box at a future time.
- Click **Reset** to abandon any changes and return the gamma line to its original diagonal position.
- Click **OK** to save your changes and close the dialog box.
- Click **Cancel** to abandon your changes and close the dialog box.

The Message Board

The KN2108 / KN2116 supports multiple user logins, which can possibly give rise to access conflicts. To alleviate this problem, a message board feature has been provided, allowing users to communicate with each other.

The message board functions much like an internet chat program does. When you click the Message Board icon on the Windows Client Control Panel (see page 69), a screen similar to the one below appears:



The Button Bar

The buttons on the Button Bar are toggles. Their actions are described in the table below:

Button	Action
	Enable/Disable Chat. When disabled, messages posted to the board are not displayed. The button is shadowed when Chat is disabled. The icon displays next to the user's name in the User List panel when he has disabled Chat.
	Occupy/Release Keyboard/Video/Mouse. When you Occupy the KVM, other users cannot see the video, and cannot input keyboard or mouse data. The button is shadowed when the KVM is occupied. The icon displays next to the user's name in the User List panel when he has occupied the KVM.
	Occupy/Release Keyboard/Mouse. When you Occupy the KM, other users can see the video, but cannot input keyboard or mouse data. The button is shadowed when the KM is occupied. The icon displays next to the user's name in the User List panel when he has occupied the KM.
	Show/Hide User List. When you Hide the User List, the User List panel closes. The button is shadowed when the User List is open.

Message Display Panel

Messages that users post to the board - as well as system messages - display in this panel. If you disable Chat, however, messages that get posted to the board won't appear.

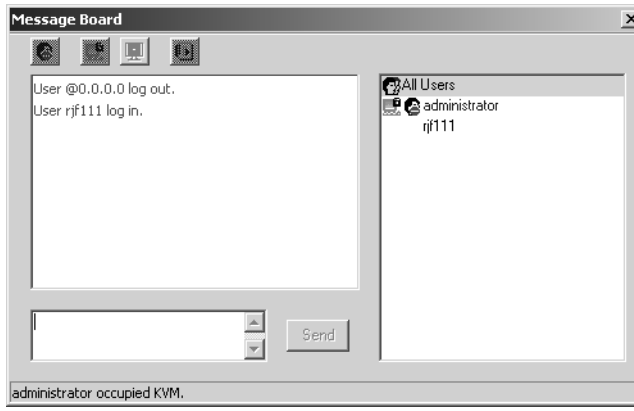
Compose Panel

Key in the messages that you want to post to the board in this panel. Click Send, or press [Enter] to post the message to the board.

User List Panel

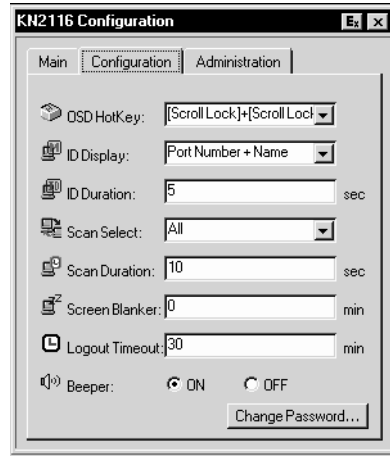
The names of all the logged in users are listed in this panel.

- Your name appears in olive; other users' names appear in green.
- By default, messages are posted to all users. To post a message to one individual user, select the user's name before sending your message.
- If a user's name is selected, and you want to post a message to all users, select All Users before sending your message.
- If a user has disabled Chat, its icon displays before the user's name to indicate so.
- If a user has occupied the KVM or the KM, its icon displays before the user's name to indicate so.



The Configuration Page

The OSD *Configuration* page allows users to set up their own, individual, working environments. The KN2108 / KN2116 stores a separate configuration record for each user profile, and sets up the working configuration according to the *Username* that was keyed into the Login dialog box.



The Configuration page settings are explained in the following table:

Setting	Function
OSD Hotkey	Selects which Hotkey controls the OSD function: [Scroll Lock] [Scroll Lock], or [Ctrl] [Ctrl]. Since the Ctrl key combination may conflict with programs running on the computers, the default is the Scroll Lock combination.
ID Display	Selects how the Port ID is displayed: the Port Number alone (PORT NUMBER); the Port Name alone (PORT NAME); or the Port Number plus the Port Name (PORT NUMBER + PORT NAME). The default is PORT NUMBER + PORT NAME.
ID Duration	Determines how long a Port ID displays on the monitor after a port change has taken place. You can choose an amount from 1 ~ 255 seconds. The default is 3 Seconds.
Scan Select	Selects which computers will be accessed under Auto Scan Mode (see *Auto Scanning*, page 64). Choices are: ALL - All the Ports which have been set Accessible (see *Port Access*, page 38); POWERED ON - Only those Ports which have been set Accessible and are Powered On; QUICK VIEW - Only those Ports which have been set Accessible and have been selected as Quick View Ports (see *Quick View Ports*, page 29); QUICK VIEW + POWERED ON - Only those Ports which have been set Accessible and have been selected as Quick View Ports and are Powered On. The default is ALL.
Scan Duration	Determines how long the focus dwells on each port as it cycles through the selected ports in Auto Scan Mode (see *Auto Scanning*, page 64). Key in a value from 1 ~ 255 seconds. The default is 5 seconds; a setting of 0 disables the Scan function.
Screen Blanker	If there is no input from the console for the amount of time set with this function, the screen is blanked. Key in a value from 1 ~ 30 minutes. A setting of 0 disables this function. The default is 0 (disabled).
Logout Timeout	If there is no Operator input for the amount of time set with this function, the Operator is automatically logged out. A login is necessary before the KN2108 / KN2116 can be accessed again.
Beeper	When set to ON, the beeper sounds whenever a Port is changed; when activating the Auto Scan function (see *Auto Scanning*, page 64); or an invalid entry is made on an OSD menu. The default is ON.
Change Password	Clicking this button brings up a dialog box that allows users to change their passwords.

Chapter 6
The Java Client

Activating the Browser OSD

After you have successfully logged in (see p. 55), to activate the browser Java Client OSD do the following:

1. Click the Java Client button (the one without the arrow) at the left of the web page.

Note: 1. You must have Sun's Java 2 JRE 1.4.2 or higher installed on your computer. Java is available for free download from the Sun Java website: http://java.sun.com.

2. The Java Client button with the arrow is for running the AP version of the Java Client (See *The Java Client*, page 106).

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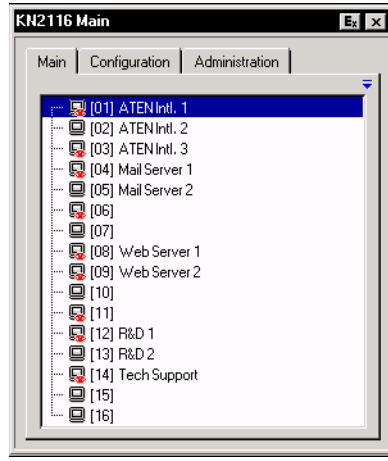
2. Accept the security certificates.
3. When the browser dialog asks what to do with the program file, click **Open**.

Note: 1. If the browser cannot run the file, save it to disk, instead. Then, with your browser still open to the KN2108 / KN2116 web page, run the file from your disk.

2. If you use the *save to disk* method, for security purposes, you cannot simply run a previously downloaded version of the browser-based Java client. Each time you want to access the KN2108 / KN2116, you must log in to the web page with a valid username and password to download a fresh copy of the program.

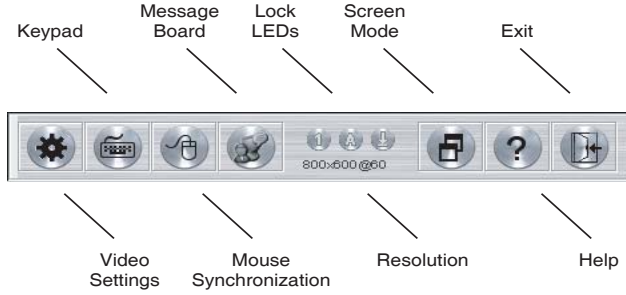
When you bring up the OSD, the Main Screen comes up in the center of your monitor.



This is the same OSD Main Screen that appears when the Windows Client is invoked. For an explanation of this screen see *The Main Page*, page 61.

The Java Client Control Panel

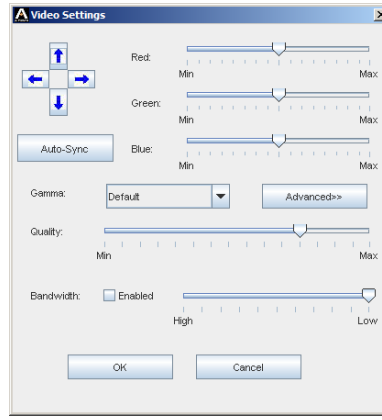
Instead of a control panel like the one that the Windows Client uses, the Java Client has a hidden control panel, located at the bottom center of the screen. The panel becomes visible when the mouse pointer is moved over it.



The functions of the Control Panel icons are described in the sections that follow.

Video Settings

Clicking this button brings up the *Video Settings* dialog box:



This is similar to the *Windows Client* Video Settings dialog box. See *Video Settings*, page 73.

Keypad

Some keyboard combinations cannot be captured and sent to the KN2108 / KN2116. In order to implement their effects on the remote system, this function provides a one click implementation of some common window control combinations.

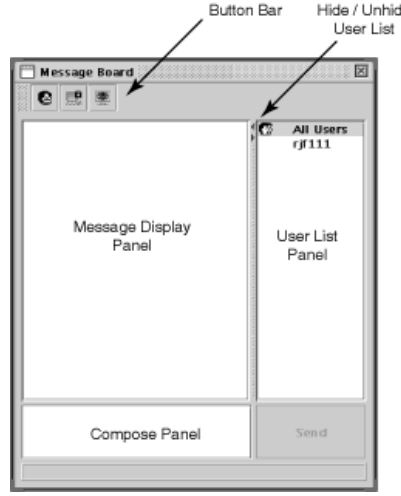
Mouse Synchronization

At times the local mouse movement may lose sync with the remote mouse movement. The Mouse Synchronization function gets them back into sync. There are two methods available to bring the pointers into sync:

1. Click the *Mouse Synchronization* button; wait for the remote mouse pointer to move to the upper left corner of the screen; move your local mouse pointer directly on top of the remote pointer, and click.
2. Move your local mouse pointer over the *Java Client Control Panel*, and click.

The Message Board

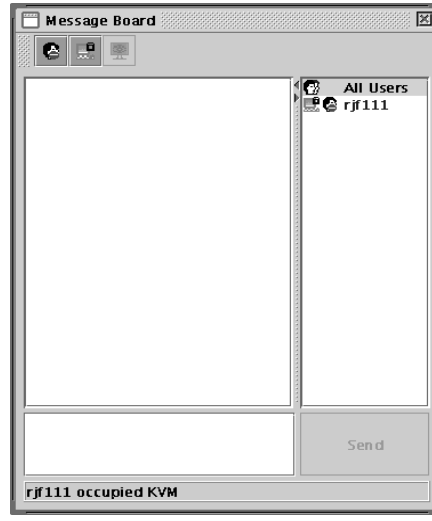
The KN2108 / KN2116 supports multiple user logins, which can possibly give rise to access conflicts. To alleviate this problem, a message board feature has been provided, allowing users to communicate with each other.
The message board functions much like an internet chat program does. When you click the Message Board icon on the Java Client Control Panel (see page 82), a screen similar to the one below appears:



The Button Bar

The buttons on the Button Bar are toggles. Their actions are described in the table below:

Button	Action
	Enable/Disable Chat. When disabled, messages posted to the board are not displayed. The button is shadowed when Chat is disabled. The icon displays next to the user's name in the User List panel when he has disabled Chat.
	Occupy/Release Keyboard/Video/Mouse. When you Occupy the KVM, other users cannot see the video, and cannot input keyboard or mouse data. The button is shadowed when the KVM is occupied. The icon displays next to the user's name in the User List panel when he has occupied the KVM.
	Occupy/Release Keyboard/Mouse. When you Occupy the KM, other users can see the video, but cannot input keyboard or mouse data. The button is shadowed when the KM is occupied. The icon displays next to the user's name in the User List panel when he has occupied the KM.



- Messages that users post to the board - as well as system messages - display in the Message Display panel. If you disable Chat, however, messages that get posted to the board won't appear.
- Key in the messages that you want to post to the board in the Compose panel. Click Send, to post the message to the board.
- The names of all the logged in users appear in the User List panel.
  - By default, messages are posted to all users. To post a message to one individual user, select the user's name before sending your message.
  - If a user's name is selected, and you want to post a message to all users, select All Users before sending your message.
  - If a user has disabled Chat, its icon displays before the user's name to indicate so.
  - If a user has occupied the KVM or the KM, its icon displays before the user's name to indicate so.
  - To Hide/Unhide the User List panel, click on the arrows in the panel separator.

Lock Key LEDs

These LEDs show the Num Lock, Caps Lock, and Scroll Lock status of the remote computer. They turn Green when the Lock status is On. Click on the icon to toggle the status.

Note: When you first connect, the LED display may not be accurate. To be sure, click on the LEDs to set them.

Resolution

The video resolution of the device at the remote location displays directly below the Lock LEDs.

Question Mark

Clicking this button brings up the online help screen.

Exit

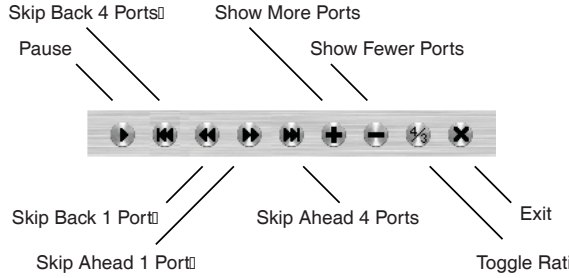
Clicking Exit terminates the Java Client session.

Port Operation

Java Client port operation is the same as for the Windows Client. See page 62 for port operation details.

Panel Array Mode

Except for some differences in the toolbar, this is very similar to the Windows Client Panel Array Mode (see page 66 for details). The Java Client Panel Array Mode Toolbar is shown below:



Note: When you click *Pause*, the Array stops scanning the ports. The button changes to an arrowhead and its caption changes to *Resume*. To resume scanning, click the Resume button.

Hotkey Operation

Hotkey operation is the same as for the Windows Client. See page 64 for operation details.

The Configuration Page

The Java Client Configuration Page is the same as for the Windows Client. See page 79 for configuration details.

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Chapter 7
The Log File

The Main Screen

The KN2108 / KN2116 logs all the events that take place on it. To view the contents of the log file, click the *Log* icon at the left of the web page. A screen similar to the one below appears:

ALTUSEN
General
Sync
Firmware
Logout
Windows Client
Java Client
Windows Client
Java Client
Log Server
PON
Log
KN2116 Log Information
2005-10-18
09:03:38 User from 00-0D-61-10-A6-74 10.0.13.68 attempting to login
09:04:08 Sys: Connected with 10.0.13.68 (00-0D-61-10-A6-74)
09:04:09 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
09:04:13 Video: Start.
09:04:39 Video: Stop.
09:04:39 Sys: Disconnected with 10.0.13.68 (00-0D-61-10-A6-74)
09:04:46 Sys: Connected with 10.0.13.68 (00-0D-61-10-A6-74)
09:04:46 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
09:04:51 Video: Start.
09:05:00 Video: Detecting video mode: 0x0@0.
09:06:01 Sys: Time out - no action.
09:06:12 Sys: Connected with 10.0.13.68 (00-0D-61-10-A6-74)
09:06:12 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
09:06:16 Video: Start.
09:07:14 Sys: Time out - no action.
09:07:27 Sys: Connected with 10.0.13.68 (00-0D-61-10-A6-74)
09:07:27 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
09:07:32 Video: Start.
09:07:43 Video: Detecting video mode: 0x0@0.
09:09:34 Sys: Time out - no action.
09:09:43 Sys: Connected with 10.0.13.68 (00-0D-61-10-A6-74)
09:09:44 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
09:10:45 Sys: Time out - no action.
09:10:12 Sys: Connected with 10.0.13.60 (00-0D-61-10-A6-74)
09:18:12 Sys: Access via windows client (IP = 10.0.13.68 MAC = 00-0D-61-10-A6-74).
Clear Log

- The log file tracks a maximum of 512 events. When the limit is reached, the oldest events get discarded as new events come in.
- To clear the log file, click the *Clear* Log icon at the bottom right of the file.

Note: The Log File is temporary. Its contents are lost when the KN2108 / KN2116 is turned off or loses power. To have the contents written to a permanent log file, which is a searchable database, the Log Server needs to be installed and configured. See Chapter 8 for details.

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Chapter 8
The Log Server

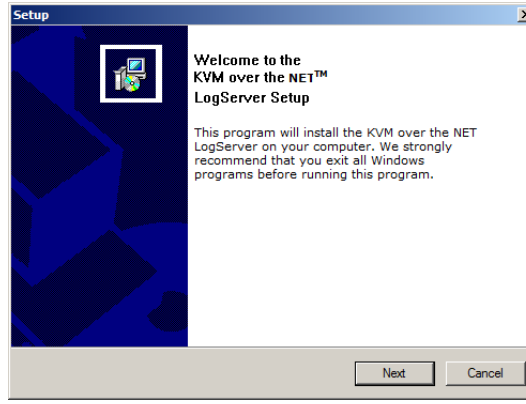
The Windows-based Log Server is an administrative utility that records all the events that take place on selected KN2108 / KN2116 units and writes them to a searchable database. This chapter describes how to install and configure the Log Server.

Installation

1. From the computer that you want to use as the Log Server, open your browser and log into the KN2108 / KN2116 (see page 55).
2. Click the *Log Server* button at the left of the web page to start the Log Server installation program.
3. When the browser dialog asks what to do with the program file, click **Run**.

Note: If the browser cannot run the file, save it to disk, instead, and run the file from your disk.

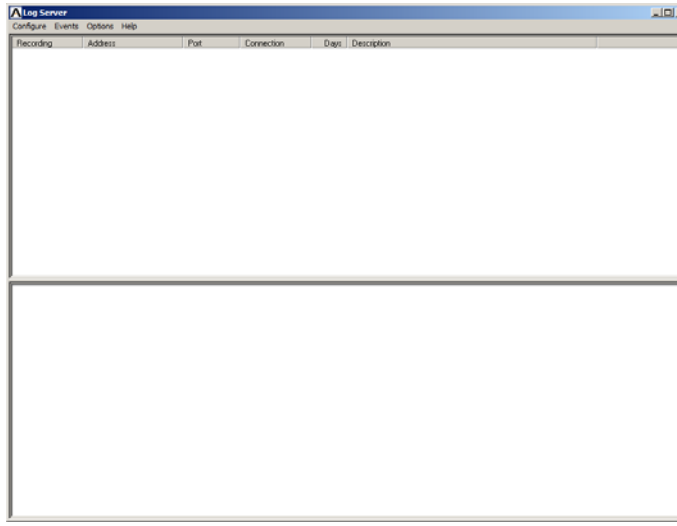
The Log Server installation screen appears:


Setup
Welcome to the
KVM over the NET™
LogServer Setup
This program will install the KVM over the NET LogServer on your computer. We strongly recommend that you exit all Windows programs before running this program.
Next
Cancel

4. Click Next, and follow the on-screen instructions to complete the installation and have the Log Server program icon placed on your desktop.

Starting Up

To bring up the Log Server, either double click the program icon, or key in the full path to the program on the command line. The first time your run it, a screen similar to the one below appears:



Note: The MAC address of the Log Server computer must be specified on the *Network* page of the Administrator Utility (see *Log Server*, page 40).

The screen is divided into three components:

- A *Menu Bar* at the top
- A panel that will contain a list of KN2108 / KN2116 units in the middle (see *The Log Server Main Screen*, page 97).
- A panel that will contain an *Events List* at the bottom

Each of the components is explained in the sections that follow.

The Menu Bar

The Menu bar consists of four items:

- Configure
- Events
- Options
- Help

These are discussed in the sections that follow.

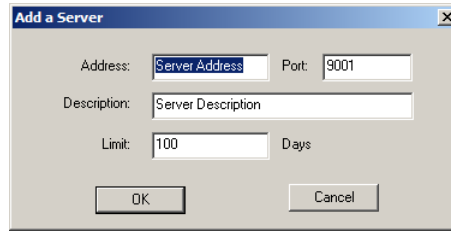
Note: If the Menu Bar appears to be disabled, click in the KN2108 / KN2116 List window to enable it.

Configure

The Configure menu contains three items: Add; Edit; and Delete. They are used to add new KN2108 / KN2116 units to the KN2108 / KN2116 List; edit the information for units already on the list; or delete KN2108 / KN2116 units from the list.

- To add a KN2108 / KN2116 to the list, click **Add**.
- To edit or delete a listed KN2108 / KN2116, first select the target in the List window, then open this menu and click **Edit** or **Delete**.

When you choose *Add* or *Edit*, a dialog box, similar to the one below, appears:



A description of the fields is given in the table, below:

Field	Explanation
Address	This can either be the IP address of the KN2108 / KN2116 or its DNS name (if the network administrator has assigned it a DNS name).
Port	The *Access Port* number assigned to the KN2108 / KN2116 (see *Access Port*, page 39).
Description	This field is provided so that you can put in a descriptive reference for the unit to help identify it.
Limit	This specifies the number of days that an event should be kept in the Log Server's database. Events that exceed the amount of time specified here can be removed with the Maintenance function (see *Maintenance:*, page 95).

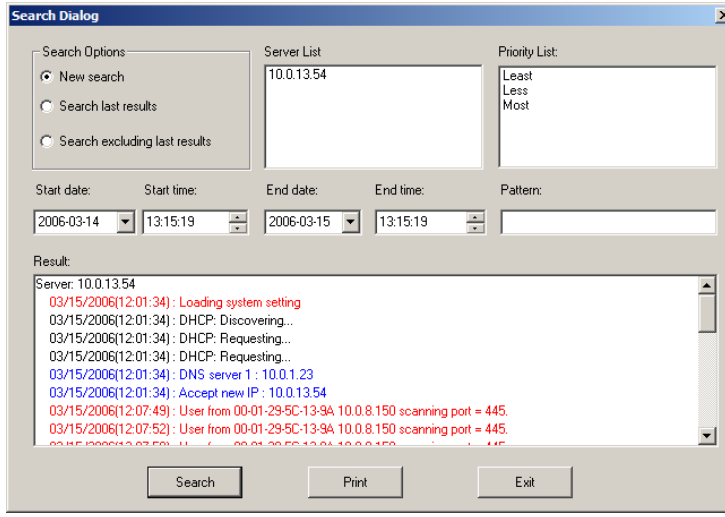
Fill in or modify the fields, then click **OK** to finish.

Events

The Events Menu has two items: *Search* and *Maintenance*.

Search:

Search allows you to search for events containing specific words or strings. When you access this function, a screen, similar to the one below, appears:



A description of the items is given in the table, below:

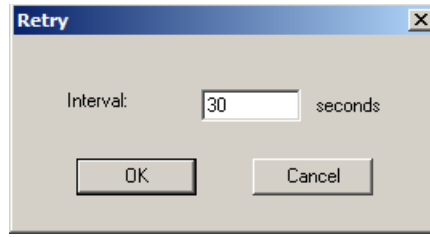
Item	Description
New search	This is one of three radio buttons that define the scope of the search. If it is selected, the search is performed on all the events in the database for the selected KN2108 / KN2116.
Search last results	This is a secondary search performed on the events that resulted from the previous search.
Search excluding last results	This is a secondary search performed on all the events in the database for the selected KN2108 / KN2116 excluding the events that resulted from the previous search.
KN2108 / KN2116 List:	KN2108 / KN2116 units are listed according to their IP address. Select the unit that you want to perform the search on from this list. You can select more than one unit for the search. If no units are selected, the search is performed on all of them.
Priority	Sets the level for how detailed the search results display should be. 1 is the most general; 3 is the most specific.
Start Date	Select the date that you want the search to start from. The format follows the MM/DD/YYYY convention.
Start Time	Select the time that you want the search to start from. The format follows the HH:MM:SS convention.
End Date	Select the date that you want the search to end at.
End Time	Select the time that you want the search to end at.
Pattern	Key in the pattern that you are searching for here. The multiple character wildcard (%) is supported. E.g., h%ds would match hands and hoods.
Results	Lists the events that contained matches for the search.
Search	Click this button to start the search.
Print	Click this button to print the search results.
Exit	Click this button to exit the Log Server.

Maintenance:

Records are not automatically erased when their time limit (set with the Limit setting of the Edit function - see page 94), comes due. They still remain in the database even though they have exceeded their expiration time. Clicking this menu item removes those records from the database.

Options

Network Retry allows you to set the number of seconds that the Log Server should wait before attempting to connect if its previous attempt to connect failed. When you click this item, a dialog box, similar to the one below, appears:



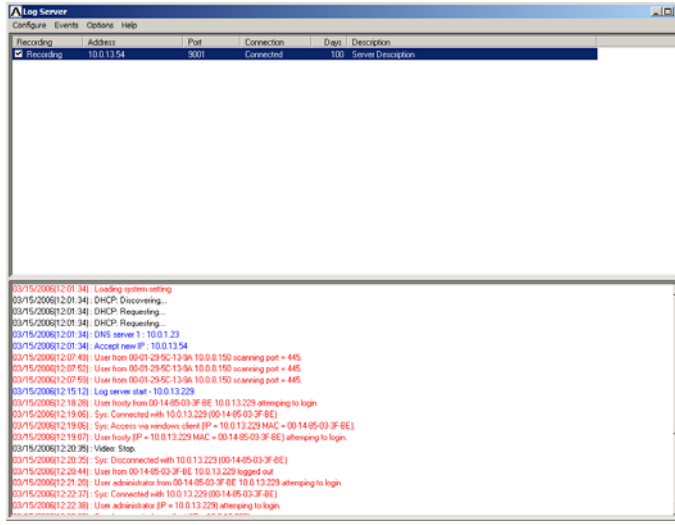
Key in the number of seconds, then click **OK** to finish.

The Log Server Main Screen

Overview

The Log Server Main Screen is divided into two main panels.

- The upper (List) panel lists all of the KN2108 / KN2116 units that have been selected for the Log Server to track (see *Configure*, page 93).
- The lower (Tick) panel displays the tick information for the currently selected KN2108 / KN2116 (if there are more than one, it is the highlighted one).
- To select a KN2108 / KN2116 unit in the list, simply click on it.


Log Server
Configure Events Options Help
Recording Address Port Connection Days Description
Recording 10.0.13.54 9001 Connected 100 Server Description

The List Panel

The List panel contains six fields:

Field	Explanation
Recording	Determines whether the Log Server records the ticks for this KN2108 / KN2116, or not. If the Recording checkbox is checked, the field displays Recording, and the ticks are recorded. If the Recording checkbox is not checked, the field displays Paused, and the ticks are not recorded. **Note:** Even though a KN2108 / KN2116 is not the currently selected one, if its Recording checkbox is checked, the Log Server will still record its ticks.
Address	This is the IP Address or DNS name that was given to the KN2108 / KN2116 when it was added to the Log Server (see *Configure*, page 93).
Port	This is the Access Port number assigned to the KN2108 / KN2116 (see *Configure*, page 93).
Connection	◆ If the Log Server is connected to the KN2108 / KN2116, this field displays *Connected*. ◆ If the Log Server is not connected, this field displays *Waiting*. This means that the Log Server's MAC address has not been set properly. It needs to be set on the *Network* page of the Administrator Utility (see page 41).
Days	This field displays the number of days that the KN2108 / KN2116's events are to be kept in the Log Server's database before expiration (see *Configure*, page 93).
Description	This field displays the descriptive information given for the KN2108 / KN2116 when it was added to the Log Server (see *Configure*, page 93).

The Tick Panel

The lower panel displays tick information for the currently selected KN2108 / KN2116. Note that if the installation contains more than one switch, even though a switch isn't currently selected, if its *Recording* checkbox is checked, the Log Server records its tick information and keeps it in its database.

Chapter 9
AP Operation

Overview

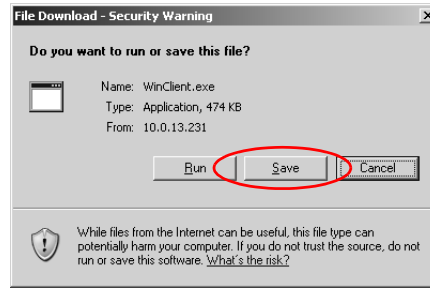
In some cases, the Administrator may not want the KN2108 / KN2116 to be available via browser access. AP versions of the Windows and the Java Clients are provided to enable direct access of the KN2108 / KN2116 without having to go through a browser. The programs are initially downloaded from the browser page, but after they have been downloaded by the Users, the Administrator can disable browser access (see *Working Mode*, page 47).

The Windows Client

Installation

To install the Windows Client on your computer, do the following:

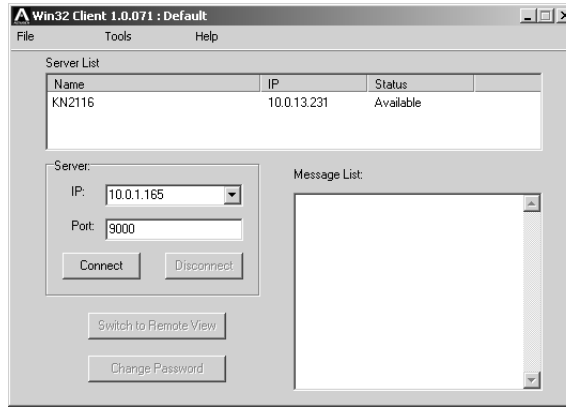
1. Log into the KN2108 / KN2116 with your browser, and click the second Windows Client button (the one with the arrow). A screen similar to the one below appears:


File Download - Security Warning
Do you want to run or save this file?
Name: WinClient.exe
Type: Application, 474 KB
From: 10.0.13.231
Run
Save
Cancel
While files from the Internet can be useful, this file type can potentially harm your computer. If you do not trust the source, do not run or save this software. What's the risk?

2. Click **Save**.
3. In the dialog box that comes up, specify a location on your hard disk to save it to.

Starting Up

To connect to the KN2108 / KN2116, go to the location on your hard disk that you saved the Windows Client program to, and double click its icon (WinClient.exe) to bring up the Windows Client Connection Screen:



Note: You must have DirectX 7.0 or higher installed on your computer. If not, the Client program will not load.

A description of the Connection Screen is given in the following table:

Item	Description
Menu Bar	The Menu Bar contains three items: File, Tools, and Help. 1. The *File Menu* allows the operator to Create, Save, and Open user created *Work* files (see page 102). 2. The *Tools Menu* contains two entries: Keyboard and Config, (see page 102).
Server List	Each time WinClient.exe is run, it searches the User's local LAN segment for KN2108 / KN2116 units, and lists whichever ones it finds in this box. If you want to connect to one of these units, **double click** it.

(Continues on next page.)

(Continued from previous page.)

Item	Description
Server	This area is used when you want to connect to a KN2108 / KN2116 at a remote location. ◆ You can drop down the IP list box and select an address from the list. ◆ If the address you want isn't listed, you can key in the IP address of your target, then key in the Port number in the Port field. (If you don't know the Port number contact the Administrator.) ◆ When the IP address and Port number for the target unit have been specified, click Connect to start the connection. ◆ When you have finished with your session, click Disconnect to break the connection.
Message List	Lists status messages regarding the connection to the KN2108 / KN2116.
Switch to Remote View	Once contact with a KN2108 / KN2116 has been established, this button becomes active. Click it to switch and take over console control of the unit that is attached to the KN2108 / KN2116. The screen output of the unit appears on your monitor. Your keystrokes and mouse movements are captured and sent to the KN2108 / KN2116 to be executed on the attached unit. If the KN2108 / KN2116 is connected to a KVM switch, you can control the switch and the computers connected to it just as if you were connected locally.
Change Password	This button becomes active after a connection to a KN2108 / KN2116 has been established. It allows the User to change the password he logs onto the KN2108 / KN2116 with.

The File Menu

The File Menu allows the operator to Create, Save, and Open user created Work files. A Work File consists of all the information specified in a Client session. This includes the *Server List* and *Server IP* list items, as well as the Hotkey settings.

Whenever a user runs the Client program, it opens with the values contained in the current work file. The current work file consists of the values that were in effect the last time the program was closed.

The File menu consists of three items, as follows:

Item	Description
New	Allows the user to create a named work file so its values will not be lost, and it will be available for future recall.
Open	Allows the user to open a previously saved work file and use the values contained in it.
Save	Allows the user to save the values presently in effect as the current work file.

The Tools Menu

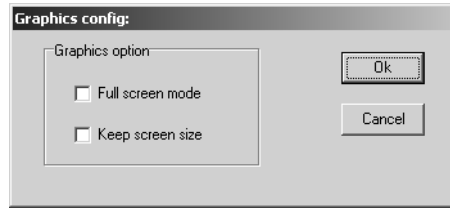
Tools menu operations are performed after you connect, but before you switch to remote view. There are two entries on the Tools Menu: *Keyboard* and *Config*. They are explained in the sections that follow.

Keyboard:

Various configuration actions related to the keyboard, video, and mouse can be performed via hotkey combinations. The Hotkey Setup utility is accessed by opening the *Tools* menu and selecting *Keyboard*. The *Hotkey Setup* utility that comes up is essentially the same dialog box as the one discussed in the browser-based Windows Client chapter. Refer to *Hotkey Operation Overview*, page 64 for details.

Config:

When you select *Config*, a screen similar to the one below appears:

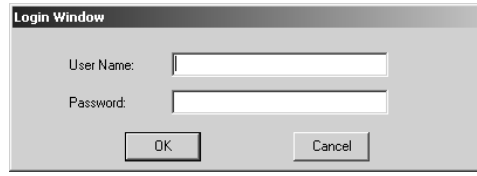


- If *Full Screen Mode* is enabled (there is a checkmark in the box), the remote display fills the entire screen of your local monitor.
- If *Full Screen Mode* is not enabled (there is no checkmark in the box), the remote display appears as a window on your desktop. If the remote screen is larger than what is able to fit in the window, move the mouse pointer to the screen border that is closest to the area you want to view and the screen will scroll.
- If *Keep Screen Size* is enabled (there is a checkmark in the box), the remote screen is not resized.
  - If the remote system's resolution is smaller than your local one, its display appears as a window centered on your screen.
  - If the remote system's resolution is larger than your local one, its display is centered on your screen. To access the areas that are off screen, move the mouse to the corner of the screen that is closest to the area you want to view and the screen will scroll.
- If *Keep Screen Size* is not enabled (there is no checkmark in the box), the remote screen is resized to fit the resolution of your local monitor.

Connecting

To connect to a KN2108 / KN2116 unit:

1. If it is in the Server List, **double click** it; if you are using the Server IP input box, specify the IP address and Port number, then click **Connect**. A *Login* dialog box appears:

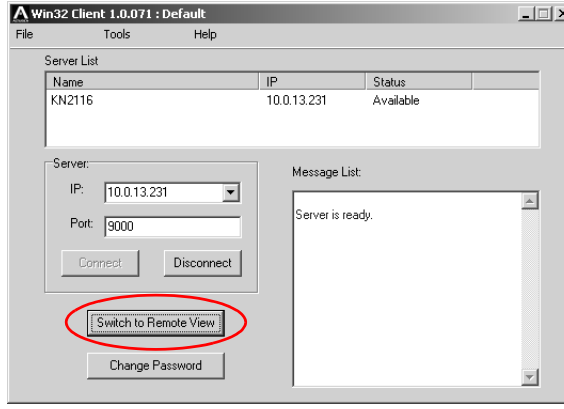


2. Key in a valid Username and Password, then click **OK**.

   The program attempts to contact your selected KN2108 / KN2116 unit. While it does so, you can check the *Message List* window for status messages regarding the operation's progress.

3. Once contact with the KN2108 / KN2116 has been established, the *Switch to Remote View* button becomes active.

   Click it to connect to the KN2108 / KN2116 and take over console control of the unit that is connected to it.



Operation

Once the connection to the KN2108 / KN2116 has been accomplished, the remote system's video output is captured and displayed on your monitor. At the same time, your local keystroke and mouse input is captured and sent to the remote system.

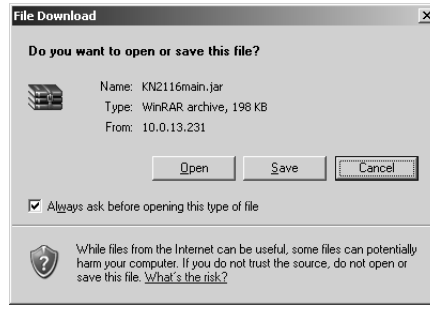
The look and feel of the AP Windows client operation is the same as for the browser version of the Windows client. See chapter, beginning on page 59 for details.

The Java Client

Installation

To install the Java Client on your computer, do the following:

1. Log into the KN2108 / KN2116 with your browser, and click the second Java Client button (the one with the arrow). A screen similar to the one below appears:


File Download
Do you want to open or save this file?
Name: KN2116main.jar
Type: WinRAR archive, 198 KB
From: 10.0.13.231
Open
Save
Cancel
Always ask before opening this type of file
While files from the Internet can be useful, some files can potentially harm your computer. If you do not trust the source, do not open or save this file. What's the risk?

2. Click Save.
3. In the dialog box that comes up specify a location on your hard disk to save it to.

Starting Up

To connect to the KN2108 / KN2116 do the following:

1. Open a command line window and change to the directory where the Java Client file (KN2108main.jar or KN2116main.jar) is at.
2. From the command line, issue the following command:

   ```
   java - jar KN2108main.jar
   ```

   Or

   ```
   java - jar KN2116main.jar
   ```

Note: The Java Client requires Java version 1.4.2 or higher. It will not work with earlier versions of Java.

An Address Input dialog box appears:

Java Client 1.0.072
JAVA CLIENT Version 1.0.072
Welcome to the Java Client
Now you can access your remote KVM or servers from your local console via the internet.
Address Input
Enter Address: 10.0.13.54/abcdefg
OK
KN2116
Cancel

3. Key in the IP address for the unit you want to connect to - including a forward slash followed by the login string (set by the administrator).

Note: For security purposes, the login string must be specified correctly as part of the IP address. The system administrator may change the string from time to time to thwart unauthorized access attempts. Be sure you have the correct string when you attempt to connect.

After you establish a connection, a Login dialog box appears:

4. Provide a valid Username and Password and Click OK. Once the authentication procedure completes successfully, the KN2108 / KN2116 main page displays on your monitor.

Operation

The look and feel of the AP Java client operation is the same as for the browser version of the Java client. See Chapter 6, beginning on page 81, for details.

Appendix

Troubleshooting

General Operation

Symptom	Possible Cause	Action
Erratic Operation	System needs to be reset	Press and hold the *Reset* switch (see page 7) for longer than three seconds.
Mouse and/or Keyboard not responding.	Improper mouse and/or keyboard reset.	Unplug the cable(s) from the console port(s), then plug it/them back in.
Sudden loss of network connection.	Local reset of the KN2108 / KN2116.	Close your KN2108 / KN2116 connection. Wait approximately 30 seconds, and log in again.
No video display on the remote console.	The local console resolution is set to 1600 x 1200 but remote consoles only support 1280 x 1024.	Set the local console resolution to 1280 x 1024.
When logging in from a browser, the following message appears: *404 Object Not Found.*	The *login string* was not included when the IP address was specified.	Make sure to include the forward slash and correct login string when you specify the KN2108 / KN2116's IP address. (See *Default Web Page Name*, page 46.)
When I log in, the browser generates a *CA Root certificate is not trusted*, or a *Certificate Error* response.	The certificate's name is not found is not found on Microsoft's list of Trusted Authorities.	The certificate can be trusted. See *Trusted Certificates*, page 113, for details
There are two mouse pointers after the remote system is accessed.	This is normal. One is the local console's pointer; the other is the remote system's mouse pointer.	You can shrink the non-functioning pointer so that it is almost invisible. See *Toggle mouse display*, page 71 for details.
The display on the remote console is distorted and performing an Autosync doesn't resolve the problem.	Autosync is unable to ascertain the proper resolution.	1. Switch ports to a port with a different resolution, then switch back. 2. If the above didn't resolve the problem, change the resolution and refresh rate for the system running on the port. Afterward, you can either run at the new resolution, or switch back to the original resolution.

Administration

Symptom	Explanation	Action
After upgrading the firmware, after logging in, the KN2108 / KN2116 appears to still be using the old firmware version.	The browser is displaying cached web pages instead of fetching the new web pages.	Clear your browser's cache. Delete all temporary internet files and cookies. Close the browser and reopen it to log in with a new session.
After making changes and checking *Reset on exit* and then logging out, the KN2108 / KN2116 doesn't reset after I exit.	You are using Windows 2000 Professional and IE 5 to log into the KN2108 / KN2116.	Upgrade your browser to IE 6.0.2800.1106 or higher.
After making changes and checking *Reset on exit*, when I log back in the calendar changes to an incorrect (much earlier) date.	The KN2108 / KN2116 reverts to the firmware's release date when you *Reset on exit*.	1. Log in from a remote console to automatically recover the correct date. 2. If you log in from the local console, go to the *Administration* page and reset the calendar to the correct date (see pages 35 and 52).

The Windows Client

Problem	Resolution
Windows Client won't connect to the KN2108 / KN2116.	DirectX 7.0 or higher must be installed on your computer.
Remote mouse pointer is out of sync.	1. Use the AutoSync feature (see *Video Settings*, page 73), to sync the local and remote monitors. 2. Use the Adjust Mouse feature (see *The Configuration Page*, page 79) to bring them back in sync. 3. See *Additional Mouse Synchronization Procedures*, page 116.
Part of remote window is off my monitor.	1. If *Keep Screen Size* is not enabled (see page 60), use the *AutoSync* feature (see *Video Settings*, page 73), to sync the local and remote monitors. 2. If *Keep Screen Size* is enabled, you can scroll to the areas that are off screen. See the note on page 60 for details.
The remote screen is rotated 90 degrees.	Enable *Keep Screen Size* (see page 60).
I cannot run *Net Meeting* when the Windows Client is running.	Enable *Keep Screen Size* (see page 60).

The Java Client

For mouse synchronization problems, see *Mouse Synchronization*, page 84, and *Additional Mouse Synchronization Procedures*, page 116. For connection and operation problems, see the table below:

Problem	Resolution
Java Client won't connect to the KN2108 / KN2116.	1. Java 2 JRE 1.4.2 or higher must be installed on your computer. 2. Make sure to include the forward slash and correct string (see *Default Web Page Name*, page 46) when you specify the KN2108 / KN2116's IP address. 3. Close the Java Client, reopen it, and try again.
Pressing the Windows Menu key has no effect.	Java doesn't support the Windows Menu key.
Java Client performance deteriorates.	Exit the program and start again.
National language characters do not appear.	If the local keyboard is set to a non-English language layout, you must set the remote computer's keyboard layout to English.

The Log Server

Problem	Resolution
The Log Server program does not run.	The Log Server requires the Microsoft Jet OLEDB 4.0 driver in order to access the database. This driver is automatically installed with Windows ME, 2000 and XP. For Windows 98 or NT, you will have to go to the Microsoft download site: http://www.microsoft.com/data/download.htm to retrieve the driver file: MDAC 2.7 RTM Refresh (2.70.9001.0) Since this driver is used in Windows Office Suite, an alternate method of obtaining it is to install Windows Office Suite. Once the driver file or Suite has been installed, the Log Server will run.

Sun Systems

Problem	Resolution
Video display problems with HDB15 interface systems (e.g. Sun Blade 1000 servers).	The display resolution should be set to 1024 x 768 @ 60Hz: **Under Text Mode:** Go to OK mode and issue the following commands: setenv output-device screen:r1024x768x60 reset-all **Under XWindow:** 1. Open a console and issue the following command: m64config -res 1024x768x60 2. Log out 3. Log in
Video display problems with 13W3 interface systems (e.g. Sun Ultra servers).	The display resolution should be set to 1024 x 768 @ 60Hz: **Under Text Mode:** Go to OK mode and issue the following commands: setenv output-device screen:r1024x768x60 reset-all **Under XWindow:** 1. Open a console and issue the following command: ffbconfig -res 1024x768x60 2. Log out 3. Log in

Note: These solutions work for most common Sun VGA cards. If using them fails to resolve the problem, consult the Sun VGA card's manual.

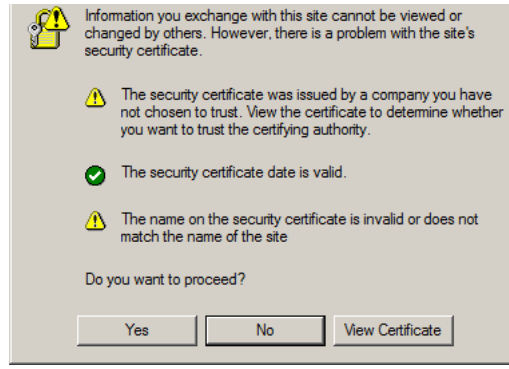
Panel Array Mode

Problem	Resolution
Low resolution video	Increase the number of panels that are displayed.
When multiple remote users are logged in, some of them only receive a partial image.	The first user to invoke Panel Array Mode should set it to display at least four panels.

Trusted Certificates

Overview

When you try to log in to the device from your browser, a Security Alert message appears to inform you that the device's certificate is not trusted, and asks if you want to proceed.


Information you exchange with this site cannot be viewed or changed by others. However, there is a problem with the site's security certificate.
The security certificate was issued by a company you have not chosen to trust. View the certificate to determine whether you want to trust the certifying authority.
The security certificate date is valid.
The name on the security certificate is invalid or does not match the name of the site
Do you want to proceed?
Yes
No
View Certificate

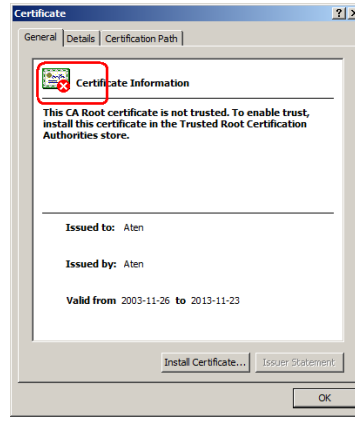
The certificate can be trusted, but the alert is triggered because the certificate's name is not found on Microsoft list of Trusted Authorities. You have two options: 1) you can ignore the warning and click **Yes** to go on; or 2) you can install the certificate and have it be recognized as trusted.

- If you are working on a computer at another location, accept the certificate for just this session by clicking **Yes**.
- If you are working at your own computer, install the certificate on your computer (see below for details). After the certificate is installed, it will be recognized as trusted.

Installing the Certificate

To install the certificate, do the following:

1. In the *Security Alert* dialog box, click **View Certificate.** The *Certificate Information* dialog box appears:



Note: There is a red and white **X** logo over the certificate to indicate that it is not trusted.

2. Click **Install Certificate**.
3. Follow the Installation Wizard to complete the installation. Unless you have a specific reason to choose otherwise, accept the default options.
4. When the Wizard presents a caution screen:

Security Warning
You are about to install a certificate from a certification authority (CA) claiming to represent:
Aten
Windows cannot validate that the certificate is actually from "Aten". You should confirm its origin by contacting "Aten". The following number will assist you in this process:
Thumbprint (sha1): F3B66988 A134DD25 1E6F09BC 895F6DCD B30FB7AF
Warning:
If you install this root certificate, Windows will automatically trust any certificate issued by this CA. Installing a certificate with an unconfirmed thumbprint is a security risk. If you click "Yes" you acknowledge this risk.
Do you want to install this certificate?
Yes
No

Click **Yes**.

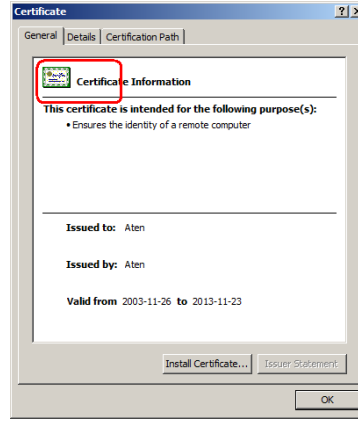
5. Next, click **Finish** to complete the installation; then click **OK** to close the dialog box.

Certificate Trusted

The certificate is now trusted:

Security Alert
Information you exchange with this site cannot be viewed or changed by others. However, there is a problem with the site's security certificate.
The security certificate is from a trusted certifying authority.
The security certificate date is valid.
The name on the security certificate is invalid or does not match the name of the site
Do you want to proceed?
Yes
No
View Certificate

When you click *View Certificate*, you can see that the red and white **X** logo is no longer present – further indication that the certificate is trusted:



Additional Mouse Synchronization Procedures

If the mouse synchronization procedures mentioned in the manual fail to resolve mouse pointer problems for particular computers, try the following:

Note: These procedures are to be performed on the computers attached to the KN2108 / KN2116's ports - not on the computer you are using to access the KN2108 / KN2116 with.

Windows:

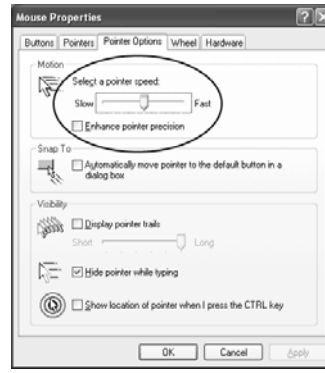
Note: In order for the local and remote mice to synchronize, you must use the generic mouse driver supplied with the MS operating system. If you have a third party driver installed - such as one supplied by the mouse manufacturer - you must remove it.

1. Windows 2000:

   Set the mouse speed to the middle position; set the mouse acceleration to *None* (Control Panel → Mouse → Mouse Properties → Motion):

2. Windows XP / Windows Server 2003:

   Set the mouse speed to the middle position; disable Enhance Pointer Precision (Control Panel → Printers and Other Hardware → Mouse → Pointer Options):



3. Windows ME:

   Set the mouse speed to the middle position; disable mouse acceleration (click **Advanced** to get the dialog box for this).

4. Windows NT / Windows 98 / Windows 95:

   Set the mouse speed to the slowest position.

Sun / Linux

Open a terminal session and issue the following command:

Sun: `xset m 1`

Linux: `xset m 0`

Specifications

Function			KN2108	KN2116
Computer Connections			8	16
Port Selection			OSD / Hotkey	
Connectors	Console Port	Keyboard	1 x 6-pin Mini-DIN Female (Purple)	
		Video	1 x HDB-15 Female (Blue)	
		Mouse	1 x 6-pin Mini-DIN Female (Green)	
	KVM Port		8 x RJ-45 Female (Black)	16 x RJ-45 Female (Black)
	Power		3-prong AC socket	
	LAN		1 x RJ-45 Female (Black)	
	PON		1 x DB-9 Male (Black)	
Switches	Reset		1 x Semi-recessed Pushbutton	
	Power		1 x Rocker	
	Port Selection		2 x Pushbutton	
LEDs	On Line		8 (Green)	16 (Green)
	Selected		8 (Orange)	16 (Orange)
	Power		1 (Blue)	
	Link		1 (Green)	
	10 / 100Mbps		1 Orange / Green	
Emulation	Keyboard/Mouse		PS/2 / USB / Serial	
Video			1280x1024 @ 60Hz	
Scan Interval			1–255 secs	
I/P Rating			100V–240VAC; 50/60Hz; 1A	
Power Consumption			120V/12W; 230V/12W	
Environment	Operating Temp.		0–40° C	
	Storage Temp.		-20–60° C	
	Humidity		0–80% RH	
Physical Properties	Housing		Metal	
	Weight		3.65 kg	3.7 kg
	Dimensions L x W x H		43.84 x 28.4 x 4.4 cm (19" 1U)	

OSD Factory Default Settings

The factory default settings are as follows:

Setting	Default
OSD Hotkey	[Scroll Lock] [Scroll Lock]
Port ID Display	Port Number + Name
Port ID Display Duration	3 Seconds
Scan/Skip Mode	All
Scan Duration	5 Seconds
Screen Blanker	0 Minutes (disabled)
Beeper	On
Accessible Ports	F (Full) For all Users on all Ports

Supported KVM Switches

While we recommend using the KH88 when cascading KVM switches, the following is a list of supported KVM switches that can also be used when configuring a cascaded installation.

- CS-88A
- CS-138A
- CS-9134
- CS-9138

Note: 1. Switches can be cascaded from the KVM ports of the Second Stage switches to make up a complete three stage installation.

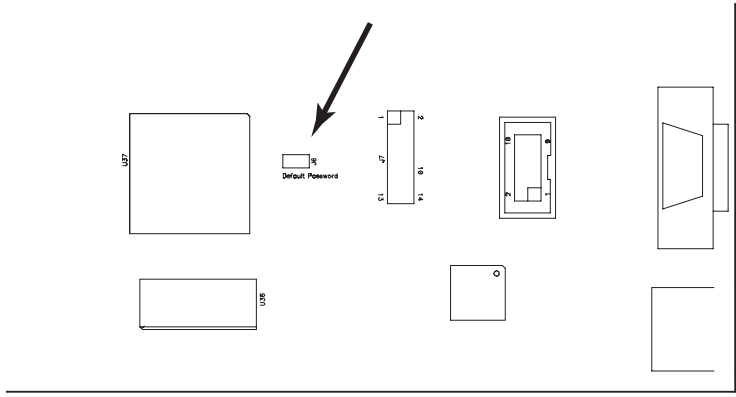
2. Refer to the User Manuals that came with your KVM switches for information on how to cascade them.

3. The installation cannot be cascaded beyond the third level.

Administrator Login Failure

If you are unable to perform an Administrator login (because the Username and Password information has become corrupted or you have forgotten it, for example) you can clear the login information with the following procedure:

1. Power off the KN2108 / KN2116 and remove its housing.
2. Short the jumper labeled J8.



3. Power on the switch.
4. When the Link and 10/100Mbps LEDs flash, power off the switch.
5. Remove the jumper cap from J8.
6. Close the housing and start the KN2108 / KN2116 back up.

After you start back up, you can use the default Username and Password (see page 27) to log in.

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